

Proceedings of the
2003 NEPA Technical Conference

February 11th–12th, 2003

EPA Headquarters, Ariel Rios Building, Room 6045
1200 Pennsylvania Avenue NW, Washington, DC

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Introduction

The following proceedings report covers the 2003 NEPA Technical Conference held from February 11th through February 12th in Washington D.C. The purpose of this document is to provide a lasting record of the proceedings, including any agreements made regarding how the NEPA Compliance Division approaches the analysis of air quality impacts within the environmental review process.

Background

The National Environmental Policy Act of 1969 (NEPA) requires environmental review of major federal actions significantly affecting the quality of the environment. The EPA has specific authority and responsibility under Section 309 of the Clean Air Act to conduct such reviews, comment in writing, and make those comment available to the public. EPA's NEPA Compliance Division, within the Office of Federal Activities, is the delegated agent maintaining oversight of this environmental review process.

As part of its review responsibilities, the NEPA Compliance program requires analysis of information regarding potential impacts to air quality. These impacts include, but are not limited to, the effects of air pollutants such as particulate matter, ground-level ozone, and various airborne toxic substances on human health and the environment. The consideration of such impacts in the context of general conformity and/or transportation conformity regulations is also frequently a required part of the environmental review process.

The NEPA Compliance Division sponsored a NEPA Technical Conference from February 11th through February 12th, 2003, in Washington D.C. as one of an annual series of meetings. Air quality impacts, particularly those related to transportation projects, were the subject of this year's conference.

Technical Program

Presentations during the NEPA Technical Conference were provided in Microsoft PowerPoint format. Conference participants exchanged comment and questions during and after each presentation. The following is a list of speakers and topics for each of the four sessions: PM_{2.5}, Air Toxics, Ground-Level Ozone, and Conformity. The remainder of this document consists of an executive summary of each presentation, followed by a chronological narrative of the proceedings, including major points brought up by speakers and the questions, answers, comment, and responses brought up during each presentation. Headings and subheadings have been added to assist the reader in finding a particular area or topic.

Speakers

The following speakers made presentations during the four sessions of the February 2003 NEPA Technical Conference.

Tuesday Morning, February 11th – Panel Subject: PM_{2.5}

- Joe Paisie, EPA: “Fine Particles in the Air”
- Bob O’Loughlin, FHWA Western Resource Center: “PM 2.5”

Tuesday Afternoon, February 11th – Panel Subject: Air Toxics

- Kathryn Sargeant, EPA: “Air Toxics and NEPA: Emerging Issues”
- Bob O’Loughlin, FHWA, “Air Toxics Session”

Wednesday Morning, February 12th – Panel Subject: Ground-Level Ozone

- Dave Stonefield, EPA: “Ground Level Ozone”
- Bob O’Loughlin, FHWA: “Ground-Level Ozone”

Wednesday Afternoon, February 12th – Panel Subject: General and Transportation Conformity

- Dave Stonefield, EPA: “General Conformity Regulation”
- Rudy Kapichak, EPA: “Transportation Conformity”
- Bob O’Loughlin, FHWA: “General and Transportation Conformity”

Executive Summary

Tuesday Morning Session, PM_{2.5}

[Joe Paisie](#), “Fine Particles in the Air.” Discussed the health effects of particulate air pollution, citing historical examples and studies. As a significant public health risk, particulate is linked to premature death from heart and lung disease, specifically affecting the respiratory and cardiovascular system. The groups at risk include people with heart or lung disease, older adults, and children. Research is proceeding in the study of particle components and types of sources generating fine particulate. The implementation of PM_{2.5} standard is estimated to prevent deaths, hospital admissions, and school and work absences. However, concern about statistical techniques used in recent studies has delayed rule development. Currently, the earliest date for decision on the PM NAAQS is 2004.

Discussion included the Fine Particle Forecasting and Mapping program the EPA will be unveiling soon. Similar to the Ozone action day program, the Fine Particulate forecasting will supply general public with levels of outdoor air PM concentrations. An Air quality index for particulate was developed with a color-coding system representing the levels of PM concentrations and corresponding health risks. The forecasting and mapping program will predict the regional transport of particulate, which impacts large number of people. PM_{2.5} can be a regional problem that affects people year-round and impact health even in attainment areas. The outlooks for PM_{2.5} non-attainment areas are heavily concentrated in California and the East.

The EPA set the PM_{2.5} standard in 1997 and withstood all legal challenges. As the standard moves forward, an approach to meet the requirements must include national, regional, and local strategies. Current national efforts include the Acid Rain program and fuel sulfur limits. Future efforts include the Clear Skies Act and the Regional Transport Rule. The Clear Skies Act is a proposed plan that uses a market-based program to reduce emissions from power generators and sets caps on multi-pollutant emissions. The Regional Transport Rule addresses power plants and industrial sources.

The PM_{2.5} implementation timeline includes non-attainment designation by December, 2004 and by December, 2009 the standard must be attained. The U.S. EPA will work with states to meet the fine particulate standards and to protect public health, through ensuring states have adequate legal authority and resources for program implantation.

[Bob O’Loughlin](#), “PM 2.5.” Discussed policy impacts and questions related to the new PM_{2.5} standard. The impacts discussion included increased number of PM nonattainment areas, focused attention on combustion process, and recognition of PM as a regional problem. The questions included what areas will be nonattainment, is the PM problem local, regional or both, what is the transportation contribution to PM, and what

are the most cost-effective strategies. Additionally, discussion included five areas: monitoring, characterization, transportation-related sources, modeling, and control strategies.

FHWA realized on a project level, more focus would be on the diesel vehicle. Studies determined that certain types of trucks generate significantly more emissions than others. Currently, PM_{2.5} issues have been raised on transportation project in California, Nevada, and Washington. The Sierra Club also raised concern of PM_{2.5} by initiating litigation on US-95 in Las Vegas. The lack of guidance on PM_{2.5} impacts from transportation projects makes analysis difficult.

Many questions and comments were raised regarding lawsuits over health effects, EIS impacts, timeline, and monitoring of the new PM_{2.5} standard.

Tuesday Afternoon Session, Air Toxics

[Kathryn Sargeant](#), “Air Toxics and NEPA: Emerging Issues.” Presentation covered the background on toxics, what is known about project-level impacts, possible analyses, and how air toxics impacts NEPA. Mobile sources are a major contributor to ambient air toxic concentrations. There are 21 mobile source air toxics, 6 of which are of the greatest concern: acetaldehyde, acrolein, benzene, 1,3-butadiene, diesel PM, and formaldehyde. These pollutants are different from other pollutants since they have no Ambient Air Quality Standards. The health effects include cancer, upper respiratory irritation and congestion, and premature deaths. No known “safe” threshold level exists, which means any exposure increases risk of negative health effects. Toxic controls currently exist through motor vehicle programs to significantly reduce toxic emissions. The controls are targeting PM and VOC, however, toxic reduction is a co-benefit. By 2020, on-highway emissions will be reduced by 67-94% from 1990 levels. Project level impacts are leading to roadway hot spots. Studies have shown elevated concentrations of Benzene, PAH, and PM along roadways, and adverse health effects associated with proximity to roadways. The adverse health effects include childhood cancer, chronic lower respiratory symptoms, pregnancy affects, and cardiopulmonary death. Tools used to provide analysis about air toxics are available. For example MOBILE6.2 estimates toxics from vehicles, air quality models like CALINE and ISCST3 estimates pollutant concentrations, exposure programs research environmental justice, and risk. However, the current tools cannot answer questions of most interest to individuals due to limited understanding and risk communication issues. As a result, toxics analysis cannot give pass-fail information for NEPA decision-making, but can be useful for description of environmental impacts, comparison of alternatives, and potential mitigation.

[Bob O’Loughlin](#), “Air Toxics Session.” Discussed the air toxic impacts of transportation projects. The 6 air toxics of greatest concern (MSAT Risk Drivers) were identified: acetaldehyde, acrolein, benzene, 1,3-butadiene, diesel PM, and formaldehyde. Studies show on-road mobile sources contribute 30-65% of the total measured concentration of the 6 MSAT risk drivers, while less than 2% for the other 15 MSATs. Air toxic impacts

have been raised on transportation projects in Arizona, California, Nevada, and Washington. These projects are considered to have significant impact according to NEPA and Environmental Justice. The current lawsuit on US-95 in Las Vegas by the Sierra Club includes air toxics as part of the complaint. Research is being done in multiple areas, such as the MATES-II study, a Colorado study of Leukemia risk to traffic density, and a California Air Resource Board (CARB) study. Additionally, FHWA is studying air toxics short and long-term affects. The MATES-II/CARB study determined mobile sources represent 89-90% of excess cancer risk, while the MATES-II study determined diesel particulate matter represents about 70% of excess cancer risk. FHWA and EPA are discussing the possibility of developing a short-term policy for reducing air toxics, but overtime controls will reduce toxics on a regional basis.

Wednesday Morning Session, Ground-Level Ozone

[Dave Stonefield](#), "Ground Level Ozone." Discussion covered how ozone is formed, ozone precursors, the standard setting process, the 1-hour ozone SIPs, the new 8-hour ozone program, and early action compacts. VOCs and NO_x combined with sunlight forms ground level ozone. These precursors are generated from many different sources. Man-made VOC emissions are mainly from solvent utilization and on-road vehicles, while NO_x emissions are generated from on-road vehicles, Non-road engines, and fuel combustion-electric utility. Elements of an air quality standard include concentration, averaging time, form, compliance period, and statistics such as an air quality indicator, rounding convention, and attainment test. If an area does not meet the 1-hour ozone standard, then they have been identified as a non-attainment area. The non-attainment classification means the area does not meet NAAQS. A NO_x SIP call has been initiated to reduce the transport of emissions. 1998 Federal rulemaking mandated NO_x emission reductions in 18 to 22 States and required to set emission caps. The new 8-hour ozone standard went final in 1997 and was upheld by the US Supreme Court in February 2001, however, they ruled against the EPA implementation approach. Based on 1999-2001 monitoring data, 291 counties violated the 8-hour standard, 155 of those counties are designated attainment for the 1-hour standard, and 136 counties are designated as non-attainment. The 8-hour standard schedule includes non-attainment designations by April 2004, Non-attainment area SIP submission by April 2007, and range of attainment dates from 2007-2021. Others issues to notice include revocation of 1-hr standard once 8-hr standard is promulgated, anti-backsliding, and Ozone transport. The early action compacts are areas committed to early actions to meet the new standard, while the non-attainment designations effective date is delayed. 34 compacts were signed by the December 31, 2002 deadline.

[Bob O'Loughlin](#), "Ground-Level Ozone." Discussed how to address the 8-hour ozone standard in NEPA documents, and how the new standard (and eventual elimination of the old 1-hour standard) will affect various regions. EPA is developing an implementation policy that should go draft in Spring or Summer, 2003. The Conformity Rule will also be revised in late 2003, possibly. New non-attainment areas will be designated and the final implementation policy will be completed in around 2004. Conformity determinations will apply one year after designation. Metropolitan Planning Organizations (MPOs) and

state/local governments will face challenges with implementing conformity. The number of areas subject to conformity could exceed the technical capabilities of the DOTs and local transportation/public works agencies. Consultation maybe required to train the local government staff responsible for conformity, which can take up to 5-years to understand.

Wednesday Afternoon Session, General and Transportation Conformity

[Dave Stonefield](#), “General Conformity Regulation.” Presented a general history of conformity regulation, the purpose of conformity rules, and basic implementation principals. Conformity requirements were added to the CAA in 1977, and the 1990 amendment reinforced the requirements. Two types of conformity exist: 1. Transportation for highways and mass transit, 2. General for everything else. The rule was promulgated in 1993. The regulation was developed to ensure federal actions will not interfere with the SIP, foster communication with State/local air quality agencies, allow for project level review, and public participation in the review. Implementation of conformity allows Federal agencies to make their own determinations and the EPA, States and public to comment on draft determinations. General Conformity evaluations include applicability requirements, conformity determinations, and procedural requirements. The EPA has developed guidance documents to assist in general conformity, which include July 13, 1994 question and answer guidance, letters to other Federal agencies, and EPA/FAA September 25, 2002 questions and answer guidance for airports.

[Rudy Kapichak](#), “Transportation Conformity.” Conformity was established by the Clean Air Act §176(c) to ensures that Federal funding and approval are given to transportation activities that are consistent with air quality goals, and applies to non-attainment and maintenance areas. Transportation conformity ensures that the SIP achieves its goals to protect public health, coordinates transportation and air quality planning processes, creates a forum for better long-term decisions, and improves data and planning assumptions. Federal highway (FWHA) and transit (FTA) actions are subject to Transportation conformity, while all other federal actions are subject to General Conformity. Transportation conformity only addresses emissions from on-road mobile source. The transportation plans, transportation improvement programs, federal projects, and regionally significant non-federal projects are considered actions subject to conformity. The MPOs, State DOTs, USDOT, and EPA are responsible for conformity, and must consult on development of SIP, TIP, and conformity determinations. Conformity is required before new transportation plans and TIPs are adopted, every three years, and within 18 months of certain SIP actions or “triggers”. A conformity lapse occurs when the transportation plan or TIP do not occur on schedule. During a lapse, no new plans, TIPs, or projects can be adopted or approved until the plan and TIP are changed, or the SIP is changed. Some projects can proceed during a lapse, and those areas do not lose their funding.

Areas that are recently redesignated as non-attainment are given a one year grace period, but after one year, the conformity plan and TIP must be in place and they are subject to

conformity frequency requirements. Project level requirements include a current conforming plan and the project must conform to the plan, hot-spot analysis in CO and PM10 areas, and compliance with SIP's PM10 control measures. However, these requirements only apply to FHWA/FTA projects.

[Bob O'Loughlin](#), "General and Transportation Conformity." Discussion covered transportation conformity as a regional and project issue. From a regional perspective, a study was done that linked transportation with air quality planning. The research examined conformity in 15 nonattainment areas. Six (6) problem areas arose: emission tests, modeling procedures, TCM implementation, fiscal constraints, SIP failures, and human failures. The study results represented the state of conformity in the early 1990's. In 2002, seven (7) areas had conformity lapses. In conclusion, where the SIP and RTP/TIP have consistent assumptions, MPOs have routinely met the conformity requirements, and where SIPs are updated more frequently, assumptions are more consistent. At the project level, decreasing CO background levels and transportation project contributions have made CO hot-spot violations highly improbable. California screens over 90% of projects with qualitative analysis. FHWA guidance (9/2000) recommends PM10 qualitative analysis, and provides protocol to assist practitioners. Overall, regional and project-level conformity are linked and there are opportunities to streamline the CO hot-spot analysis requirements.

1. Notes: [Joe Paisie](#), “Fine Particles in the Air”

| | |
|------------|---|
| Date: | Tuesday Morning, 11 Feb 2003 |
| Panel: | PM 2.5 |
| Presenter: | Joe Paisie - EPA Office of Air Quality Planning and Standards |
| Topic: | Fine Particulate in the Air |

Slide comparing PM_{2.5} to PM₁₀ and to the diameter of a human hair.

PM Regulations

Started with TSP (30 microns diameter). PM₁₀ in 1987. PM_{2.5} in 1987.

Mortality – First got people interested.

- Belgium in 1940s first episode mortality
- First in US Donora, PA south of Pittsburgh, Oct 1948. 25 people died.
- London 1952 December. Pollution levels built up. Lights turned on in daylight. Movie theaters useless. 2500 and 5000 excess deaths. Main source- soft coal. High sulfur, high ash, low level stacks. Classic particle/SO₂ episode.

Studies

Statistical techniques advanced. Early 1990s: elevated levels of particles can increase mortality.

Arden Pope (BYU) study: health effects of particles experiment. Geneva works of US Steel in Utah valley, shut down for a year or so. Hospital admissions went down. Jules Schwartz, EPA, reanalysis of data using statistical techniques. Epidemiological studies. Elevated levels of particles – mortality. Harvard study: 6 cities. Steubenville, OH to places in Kansas. Also found particle/mortality association.

Populations at Risk

Who is most at risk? The very young and very old. Those with pre-existing conditions, such as pulmonary diseases, cardiac problems. PM_{2.5} standard in 1997 was set because of concern about mortality. 12,000 – 15,000 excess deaths occurred from particulate. Standards were set based on epidemiological studies (statistical associations, not cause/effect). People want to look for the toxicological reason for mortality. People find it hard to believe that just plain particles can cause death.

PM Standards

Standard set in 1997, challenged. Remanded by DC court in 1999. Appealed to Supreme Court in 2000. Supreme Court voted 9-0 telling the DC court of appeals that their decision was wrong. DC court said the EPA needed to explain the standard, and that it was unconstitutional. Supreme court said it looked just fine; they cleared all legal challenges. PM₁₀ standard was also adjusted in 1997; they wanted to focus more on coarse particles (loosen it up a little). Court of appeals vacated the decision. Court was troubled

by the fact that EPA would be double-regulating particles under PM_{2.5}. Court did not respond to EPA's statement that they would go back to 1987 PM₁₀ standard and PM_{2.5} would be regulated under that part anyway.

Current PM NAAQS situation

- 1997 PM_{2.5} standard. Annual average 15 micrograms; 24 hours at 65 microgram at 98 percentile.
- 1987 PM₁₀ standard: 50 (annual)/150 (24-hr) micrograms. No more than one expected exceedance per year.

PM_{2.5} is justified by epidemiological studies. What is magic bullet? What is it in PM_{2.5} that causes mortality? We don't yet know. Fine particles seem to have the ability to cause people's defibrillators to fire off automatically. It seems to have an effect on the electrical system of the heart. This is one suggestion.

Sources of PM_{2.5}

Natural and Man-made; Direct and secondary

Direct Emissions

Direct: combustion (diesel, forest fires, home fireplaces, agricultural burning). Black carbon (soot) plus semi-volatile organics (volatile in flame, but condense on cooling). Metallurgical – hot iron vaporizing

Secondary Emissions

Secondary: ammonium sulfate and ammonium nitrate. Sulfate in SO₂ from fuel combustion, high sulfur coal. SO₂ and SO₄ (sulfate) reacts with ammonia.

If sulfur is scarce, then atmosphere will make ammonium nitrate. E.g., San Joaquin Valley. Ammonia sources are cars, industrial processes; however, mostly from animals (chickens, turkeys, cows, pigs).

Other secondary particles are better known as secondary organics (VOC). They undergo chemical reactions in the atmosphere. Sources include automobile fuel and surface coatings/solvents. These react to make ozone and fine particles.

Concentrations of particles in air are dominated by the secondary particles. Primary particles are there, but not dominant.

Natural sources – pinenes (e.g., Smoky Mountains). Natural pinenes react with nitric oxides to make fine particles.

Gobi desert dust, sub-Saharan Africa. Long-distance transport.

Problems with Diesel Particulates

Diesel problems. First, it contains sulfur. Also, it has direct elemental carbon emissions. Also, it emits nitrogen oxides. Diesel engines do not fully ignite the fuel. Life cycle is also a problem. They last a long time, turnover is very long. Hard to change the fleet because they take so long to go out of service.

Comment: European Diesel systems are much higher compression and burn the fuel more completely. We could go to these, but it would be expensive.

New PM2.5 NAAQS Implementation

PM 2.5 standard: We haven't started implementing it yet. Air Quality data from 1999 is available.

(Video started working here.)

Current PM2.5 levels – Geography & Sources

Graphic: Map of US. Dark green <12, light green 12-15, yellow 15-20, red >20. Southeast and east coast has lots of yellow and red. Also high conc in San Joaquin, SF, South Coast, San Diego. Also Libby, Montana – narrow mountain valley with boiler, asbestos from vermiculite. This looks at data from 1999 through 2001. Similar to ozone nonattainment areas, except that fine particles are not as much of a problem in Texas. Probably because Texas doesn't burn much coal. They use lignite, which has low sulfur and high ash. Texas has been removed from the sulfur belt. Some monitors in Houston and Dallas are close, 13-14 micrograms, but still attainment. PM10 non-attainment areas don't exactly match up. Central valley in California has both and South Coast has both.

Alaska had PM10 problems from volcanoes, etc. They don't have PM2.5 problems. Hawaii is same.

PM2.5 does not have a bright line standard. (example of bright line standard: 14.99 okay, 15 horrible) This is not the case. Even below 15, any reductions can be beneficial.

Actual vs. Expected PM2.5 Levels

Question. Were the monitoring results a surprise? Answer: No. Data are from Federal reference methods that go along with the standard. Particles are a mixture of things, so the test method really defines the pollutant. Ozone and SO₂ are homogeneous. Particles are a mixture. PM monitoring system has been out since the late 1980s. They were put out for visibility testing. One was on the mall in DC. You could look at the visibility data and take a guess as to PM2.5. DC doesn't have an industrial base, so you get some sense of nonindustrial contributors and what has been transported in. Wash DC is around 16-17 micrograms.

PM10 is affected by residential wood combustion, fugitive dust (not a PM2.5 problem). PM2.5 species do not include fugitive dust. Monitoring data says fugitive dust is not a problem for PM2.5. This is good because PM2.5 filters allow you to figure out the source of the particles by the species that are present.

Fugitive dust comes from agriculture, unpaved roads, construction, etc. The desert doesn't move much, unless it's been disturbed. Wagon trails in NV are still visible because it just has not been disturbed.

PM 2.5 Composition

PM2.5 is a complex mixture. Primary particles and secondary (from precursor gases). "Crustal" means fugitive dust, but more: species include silicon, iron, etc., related to earth's crust. This is a big part of PM10, but not PM2.5.

Particle composition varies. Graphic : size of circle and colors. Carbon gray, ammonium green, nitrate blue, sulfate yellow (low in west), crustal (minor). Chemistry is all the same; it's just the proportions of the reactants that changes. One size doesn't fit all. Sulfate, if it's emitted, then you'll see it. Nitrate low if sulfate present, high if sulfate is not. Carbon is ubiquitous. Crustal is not much of a problem. Ammonia good because it neutralizes sulfuric acid and nitric acid. Ammonia is bad because it forms particles. If ammonia were taken out of the atmosphere, you wouldn't reduce the particles as much as you think. Acids are still particles. Ammonia deposition is also a problem- eutrophication, etc. – for water quality. Might want to reduce ammonia later.

Effects of Acid Rain Program on PM2.5

Question: How much has the acid rain program helped the ammonia reduction? Answer: The program does have a benefit. The sulfur limits in the acid rain program are reducing sulfur.

Composition of PM2.5 vs. Toxicity and Health Effects

Question: Composition vs. relative toxicity and health effects? Answer: Statistical relationship between fine particles and mortality is independent of the composition of the particles. Comment: We don't know why they're dying. Response: Not really just one answer. We don't know the mechanism.

Question: Is there a connection between Asthma and fine particles? Answer: Yes, it's one of the health effects. Fine particles have been linked to asthma. Ozone is more commonly linked.

Question: Is there a connection between blood chemistry and fine particulate? Answer: Yes, blood component changes. Fine particles increases stickiness of blood. This contributes to cardiovascular problems.

There is also a problem with infant mortality (George Thurston, NYU, looked at 1952 London data). U-shaped risk: nadir at 18-19 yrs old.

Question: Health risks are generally statistical, without cause and effect, right? Answer: Yes. Reasons – first, if end effect is mortality, how do you reproduce the results? Not ethical. Develop animal models.

Sulfur Reductions: Clear Skies Program

Implementation. Acid rain and sulfur limits are reducing sulfur. Non-road rule will have same effect. Clear Skies act will reduce emissions from power generation sector; it builds on experience of acid rain program. Allowance for is \$100/ton for SO₂. People thought it would be \$2000/ton when the program started.

Question: How does the cap system work? Answer: Clear skies focuses on Eastern US. with a mandatory cap on sulfur and nitrogen oxides. Clear Skies will not solve problem for all areas. Clear skies establishes new, lower caps than acid rain program. Original CAAA 1990 had actual allocations for specific power plants; however, Clear Skies doesn't do that.

Question: Does Clear Skies accomplish anything locally? Answer: If you set the cap low enough, it doesn't matter. Since targets are so low, it's hard to let anything go uncontrolled. Concern about trading/ geographic, etc has been present. Power plant emissions: regional phenomenon. Benefits are region-wide. Stationary sources only – mercury, SO_x and NO_x. Integrated fashion. EPA is going forward to do

their own transport rule to bring about reductions. CAA was written by different people in different committees, which this causes certain problems. Clear skies is the way to go.

Clear Skies and NOx SIP Call

Question: Will the Clear Skies influence the NOx SIP call? Answer: Yes, Clear Skies will focus on SOx, NOx, and fine particulates.

PM2.5 and Mercury

Question: Hg is a problem with deposition. Is it a fine particulate problem? Answer: No.

Regional Transport Rule and PM2.5

Regional Transport Rule (RTR): Even if we do a transport rule, it won't solve everybody's problem. Ozone started out locally, later looked at regional fixes. Fine Particulate strategy will reverse this and start with a regional problem. This is cheaper and it is hard to find an uncontrolled local source. So it is more expensive to try to control people who are already being controlled.

The CAA authority dealing with regional transport. Not just power plants. Industrial boilers.

Question: Is transportation a significant source? Answer: Yes, it's significant, but we don't know whether or not it transports. Looking at dispersion models.

Question: Will we do the RTR if Clear Skies passes? Answer: Yes, RTR will capture all the Clear Skies would not.

Local reductions of PM2.5

- Making vehicles cleaner.
- Reducing impacts of burning. Wood stoves cause large PM10 problems. Retrofits were able to get them into attainment.
- Open burning impact reduction. This is still an issue. Some places this is related to agric burning. Sugar in FL, rice in CA, grass in northwest.
- PM action days.

Nice graphic of PM transport. PM is higher over cities. Opposite from ozone transport diagram, where urban cores are lower in ozone because of the NO2 coming out of tailpipes. NO2 destroys ozone.

Mass transit? Might lower ozone, but would greatly increase fine particles.

Also affect on visibility. Left: Chicago at 5 ug/m3. Right: Chicago at 35 ug/m3. Still below standard, but looks terrible.

Annual standard delivers the health benefit, not the short term.

Fine particles reduces visibility in cities and in class I areas. Regional haze standard addresses class I areas. No standard for urban visibility yet. Might do that later.

Meteorology and Natural Events

Question: Will numbers be subject to meteorological changes, natural events. Answer: Not a problem for PM2.5. Wildfires do not normally result in nonattainment. People in west are very concerned about this. Prescribed burning to get rid of invasive species. This past summer: big fires in CO. Nobody has found a violation of the annual standard because of this. There is a whole year. (Annual is actually taken over 3 years.)

Under the 24-hour standard, you can get seven readings of 65, before the next one counts.

Question: Will wildfire in southern Oregon effect their attainment? Answer: Not much effect. Oregon is not close to the standard anyway.

Northwest – agricultural burning. Not a federal activity, in general.

PM2.5 Implementation Schedule

- Rule to be promulgated in summer.
- States and tribes to recommend nonattainment areas in December. SIP call in December. December also deadline for mercury standard (consent decree).
- Finalize implementation rule in Sept 04.
- Designations in Dec 04.
- Spring 2005. EPA finalizes PM2.5 transport rule.
- Dec 2007 states and tribes submit implementation.
- Dec 2009: states and tribes attain standard (Can be extended to 2014.)

Agency policy is to use most recent 3 yrs of data.

Nonattainment area boundaries. PM2.5 has no legal presumption. Ozone had a presumption toward certain MSA's. PM2.5 is a regional problem. Lots of factors to consider.

Implementation rule: subpart 1 of CAA. Not a lot of prescribed measures. No to-do list. (Subpart 2 for ozone has lots of these. Bump-ups, control measures, etc.). Reasonable further progress, NSR, conformity, contingency measures, RACT all have to be considered.

Summary

- Fine particles linked to health effects.
- Complex problem.
- Early reductions encouraged.
- Work with states.

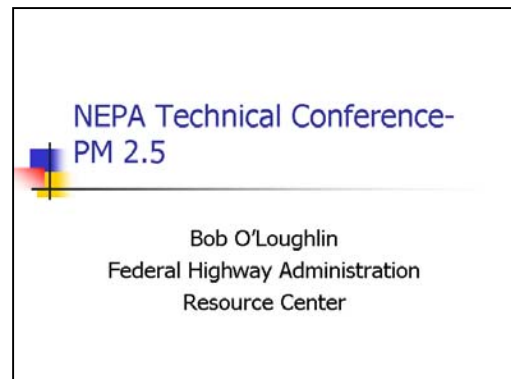
2. Notes: [Bob O'Loughlin](#), "PM 2.5"

| | |
|------------|---|
| Date: | Tuesday Morning, 11 Feb 2003 |
| Panel: | PM 2.5 |
| Presenter: | Bob O'Loughlin - Air Quality Specialist, FHWA Western Resource Center |
| Topic: | Fine Particulate in the Air |

What do we know about transportation and PM2.5?
Symposium on particulate matter research in Jan 2000 brought in local and regional people. FHWA published a book (blue book with cloud pattern), which can be obtained from Kevin Black at the HQ office.

New PM2.5 Standard

PM2.5 will increase the number of non-attainment areas in the eastern U.S. To date, the concentration has been on combustion processes. There is recognition also that PM2.5 is a regional problem.



Policy Questions

What areas are non-attainment. Still looking at monitoring.
Local, regional or both.
Contributions?
Cost-effective strategies.

Five focus areas

- Monitoring: EPA super sites.
- Characterization of PM2.5: Model of transportation; look at spatial and chemical analysis.
- Transportation sources: What parts of transportation system have bearing. Speed, deterioration, driving habits.
- Modeling: current versions don't have all the factors that might be able to pin down causes of PM2.5. Also differences exist around the country.
- Control strategies: After the problem is understood, look at comprehensive control strategies.

Project Level Focus

On the project level, there will be more focus on diesel vehicles. A California study found a very high PM2.5 emission factor for heavy-duty diesel trucks. Fine particulate issues have been raised on transportation projects in CA, Nevada, and Washington.

Litigation – Sierra Club vs. Nevada DOT

Litigation, Las Vegas, Sierra Club [slide #8]: The Nevada DOT did not analyze the PM2.5 from the project. They also challenged FHWA didn't address health effects of PM2.5. They are struggling with

the question of whether PM_{2.5} will be dealt with on a local scale. Challenge was made in the comment period, but not in the scoping period. The project is almost completed already, so what happens to the lawsuit? Areas haven't even been designated yet, so it's difficult to talk about PM_{2.5} in an EIS.

Comment: Sierra club litigated EPA on the health protection in the PM_{2.5} standard, and were shot down by the Court of appeals. Current review (every 5 yrs) is being delayed now, and EPA is being litigated on that too.

Question on Comment: Is this because it's a non-threshold pollutant like O₃ and CO? Answer: O₃ is non-threshold as well.

Question: Does the Sierra Club have an agenda? Answer: Motivation seems to be other mitigation, not necessarily air quality. Air quality provides the leverage to bring up the other issues.

Sierra club's lawsuit was filed 2 yrs after FHWA signed the ROD and started construction. No injunction was request, so construction continued. Investment had been made already. Government tried to throw it out. Judge probably won't dismiss the case.

Timing of Advanced Project Planning and PM_{2.5} Designations

Comment: Timeline for PM_{2.5} designation will coincide with advance planning of projects. FHWA question remains: Will PM_{2.5} be a local level issue? Answer: Project level. Conformity rule in 1993 said it could be a qualitative approach. 10 years later (now) it still isn't quantitative. If quantitative analysis of individual transportation project is needed, then they need a method. (Concern on Hot Spots issue.) Not much data are available yet.

Question: Are some EIS's putting in concentrations of PM_{2.5}? Answer: PM_{2.5} should be addressed. EPA guidance says to describe what the problem is, state whether it might be non-attainment, and then discuss. Note: Monitoring data today may not be what will be used when designations will be made. Hard to know if project will increase or decrease PM_{2.5}. Bob O'Loughlin says it cannot be answered now. NO_x might be more meaningful than direct PM_{2.5} emissions themselves, so it really cannot be quantified yet on a project scale.

Anticipating Non-Attainment and Conformity

Question: 1-year grace period after designations before conformity needs to be addressed. Answer: Correct.

Question: Do we know if any of the research is far enough along to get answers? Answer: EPA supersites are currently collecting data. This is available presently.

Question: EPA conformity rule? What do sources do with long-term projects? How do they anticipate? Answer: Depends on type of project. For major stationary sources: PSD. If nonattainment area: NSR. These are major permitting programs that try to anticipate things. When standard was set in 1997, they didn't really know what to do. Decided to rely on PM₁₀ for the moment. Later will have to look at PM_{2.5}.

Response from EPA Region 9: They are telling the people to anticipate whether areas are going to be in attainment of PM_{2.5} standard or not and to anticipate when regulations will kick in.

PM2.5 in NEPA & Conformity Documents

Question: Is FHWA looking at what activities are likely to contribute to 24-hr violations? Will there be a clear relationship, or a hint of a relation, where they might be able to transfer a relationship from region to region? Answer: Not really. They are still too uncertain about this.

Comment: CA established a statewide transportation conformity group in 1993. It's still going on. Info gets disseminated throughout the state. People send emails all the time on current issues.

Comment: History is that project sponsors have just done a qualitative assessment. Amounts to "how are things going in PM nonattainment area?" One-year grace period is fine, but not enough. Need more time to figure it out. Analysis is supposed to figure out contribution from the project. This is impossible.

Response: Big question is what to do about this. NEPA requires disclosure, etc.

Comment: How do we deal with this on a regional level? We don't have much information on this, but we're trying to make decisions on it. Project level analysis is not going to be possible. Response: EIS should say that it's something that will have to be dealt with in the next N years.

Comment: NEPA requires that you must mention all the information that may indicate that you have an impact. This may not be quantitative, but you can say that there's so much traffic and so and so conditions and that you'll add this much traffic.

Comment: Traffic may be moving from one place to another. It's a problem of scale.

Comment: Lots of gray area. Still need to anticipate things. If a region will have trouble with conformity, then you need to track what's going on in region. Talk to MPO, regional office, etc. Know what's going on.

Comment: New truck corridors, border issues, etc. May not have appropriate models or mitigation solutions, but we know it's going to be a problem, so it should at least be flagged.

Question: Are we talking about budget testing, like for ozone? Answer: We're looking at least 4 pollutants (NH₃, C, NO_x, SO_x, etc). It's going to be complex. Won't be one size fits all. Limiting reactants are important. Reductions in one reactant/precursor would not affect the PM levels.

Comment: Lots of instability in emission factors is anticipated. Changes are expected.

Comment: Need to be thinking of what is the responsibility of EPA to reach out to the state DOT's. Might lead to world of hurt. Impression is that public is asking for more data. People are getting more sophisticated. We can't tell whether or not more litigation is on the horizon or not. We should work on things based on what we know right now and focus on outreach.

Comment: For air toxics, we're looking at an interim policy for use right now. Need to do the same for PM_{2.5}.

Anticipating PM2.5 Mitigation Requirements

Question: Can we ask the states to talk about PM_{2.5} in the EIS's? Mitigations are diesel retrofits, etc. Answer: common sense view. Standard is out there and fully enforceable. PM_{2.5} designations will come in near future. Problem is regional/local balance. Not sure yet. Mitigations may be on a local basis only.

What if mitigations are done in another location? How do we address transport? Best advice is to state the problem of PM2.5 and discuss possible mitigation methods.

Comment: The FHWA air office has questions about mitigations, toxics, etc. They don't know how to deal with it yet.

Comment: From NEPA standpoint, it's hard to imagine that you could get away with not addressing it at all. Worthwhile to be talking about what can be reasonably included in the EIS. Lots of unknowns; data does not allow conclusions about the impacts.

Question: FHWA policy that PM2.5 not be included in EIS? Will this be revised? *Answer:* Yes, the FHWA will revise this interim position on fine particulates and toxics.

Airports and Marine Facilities

Question for regional folks: Has anyone had experience with this on airport issues? *Answer:* Lots of interest in toxics at LAX. Similar interest on O'Hare. PM2.5 would be part of this mix.

Comment: Port of LB/LA was putting new rules into place on diesel idling, etc. Proposed rule to keep idling under 2 hours, rather than 4-5 hours as is typical.

Comment: Marine diesels last forever and emit huge amounts of pollution.

Construction Projects

Comment: Construction of transportation facilities. We haven't talked much about this. Construction equipment is full of dirty diesel equipment. Response: Off-road rule deals with this. Construction equipment emits PM2.5 because of the diesel exhaust. Short-term construction emissions are noticeable. Response: AQ impact uses dispersion models, regional and local scale. We also have receptor models, which ask what's on the filter. People usually don't answer these types of questions.

Comment: They have good data from the Big Dig on construction emissions and on controls. Question is how much impact is going to be put on short-term problems. Before the Big Dig, things were short-term and self-correcting. Now they're looking at modeling and monitoring. They required retrofits and low-sulfur fuel. They also used some bio-fuels. This has gone to MA DOT to require it for other projects throughout the state.

Question: How did these BMPs end up in the contracts? *Answer:* Came from AQ subcommittee. They met quarterly on AQ impacts. They've now stopped modeling CO because it wasn't much of a problem. Now they've started PM2.5 monitoring, as of 2-3 years ago.

PM2.5 and Air Toxics (Speciation)

Comment: Toxics discussion is just starting. Whole different issue. No standard exists. Will get nice, neat numbers, but don't know what it means.

Comment: Court ruling will have great impact. Timing is important, because project is already almost done. This is in the District Court in NV.

Question: Any indication in speciation work of problem with road salt? Answer: Not so far. They are looking at 3 yrs of data in urban areas. So far, no problems with road salt or sea salt. Health effects result more from fine fraction. They wanted to eliminate the coarser ones. Some people wanted them to set the standard at 1 instead of 2.5. He has heard of problems from dry lakebeds but that's different. Follow-up: Chicago study noted visibility problems from road salt. Answer: Hot spots are part of monitoring design for specific projects, but can't be related to the national standard.

Modeling Tools – Direct vs. Indirect PM_{2.5} Sources

Question: If EPA does more dispersion modeling to parse out what facilities are contributing to overall PM_{2.5} pollution, will this make assessment of impacts on individual transportation projects any easier? Answer: It will put perspective on contribution from various sectors, but it won't tell what is significant and what is not. Similar to ozone, contribution comes from various sources. As soon as you draw a bright line, you ignore small things that may be important in combination. Part of problem with tools: they do okay for SO_x and NO_x, but lots of uncertainty for elemental carbon. That said, a direct particulate source is known to have an impact. This is easier to deal with. It's the indirect sources that are a problem.

Question follow-up: Part 5. Factors? What enhancements must be made to existing tools? It is difficult to monitor now. What can be done to the models that will make this less of a guessing game?

PM_{2.5} Hot Spots

Comment: If we know an area has a problem with hotspots. Huge truck increases, etc., contributing to particulates. Aren't there a small handful of projects that we CAN quantify in some way? Response: There are very few places that violate the 24-hr standard (associated more with hot spots). Most of the 24-hour nonattainment areas are out in CA. Answer: Not much known from research. Recent versions of MOBILE don't capture much. Speeds, driving habits, etc., are not part of the model (do not affect emission factors).

Elevated concentrations are most common within 100 m of roadway. MATES-2 study in CA. Mostly monitoring background.

When you're near the 24-hour standard, then some projects could possibly take you over the standard.

Monitoring Network

Question: Is the monitoring network insufficient to identify all problem areas? Answer: That's true. There may be places that violate 65, but they would be hot spots. Program is not driven by this short-term concern. People have option to install monitors to identify hot spots, but these are separate and not meant to deal with annual standard.

Comment: California is different as there is a correlation between annual and 24.

Question: Is there a plan to update monitoring protocols. Answer: Focus is on annual standard, health effects. Didn't meet last year's review cycle (5-yr). Being sued over this (got notice of intent to sue on Dec 24). Some people in the scientific community think that 65 is too high. They are concerned about acute effects. Would rather have 40. Some people also want a 1-hr standard. Current focus is on annual standard and general population exposure. They will take a look at shrinking the monitoring network rather than enlarging it, because some areas are already in attainment and seem to be inclined to stay that way. Next NAAQS review may end up setting a standard for particles between 2.5 and 10. For some

period of time, there will be three particle standards. Can't just drop one and pick up the next. Need to fill in the gaps.

Question: Can they just use the existing monitoring networks? Go from PM10 to PM2.5, generally you have no data. States don't collect particle size data just for fun. It's expensive. Will need to set up a 2.5-10 network. Can't just take the PM10 and subtract out the PM2.5, because the analysis methods are different. They ended up with negative numbers. Different techniques. PM10 is not as precise as the current PM2.5 technique.

Public Awareness of PM2.5

Answer: EPA is trying to talk about PM2.5 to raise people's awareness. Also, thru AQ Index program and AIRNow program, will soon do PM2.5 as well. Weather channel looks at ozone in summer. Fine particles are year-long problems. People will suddenly realize that there's bad air in fall and winter too. Forecasting will start in beginning of October 2003. Also, people will start to look at PM as the cause of decreased visibility in summer (not ozone). Humidity is also a factor because fine particles are a sponge for moisture and increase in size. There will be a real communications challenge. People will be confused about the cause of smog. Discussion about color codes: Get away from them because of apparent conflict with security. Security is the 900-lb gorilla.

Comment: Regional home pages have indices of AQ. Also there are plenty of visibility cameras out there.

Question: Will there be a website showing high PM 2.5 concentrations? Answer: This is the mapping project. Already in place for ozone. Chet Whalen is in charge of this. PM2.5 mapping might kick in later this year.

Summary

- More research is needed.
- Focus on sources of secondary particles... more uncertainty.
- Work with EPA to supplement research and find methodologies and models to address transportation problems.

3. Notes: [Kathryn Sargeant](#), “Air Toxics & NEPA: Emerging Issues”

Date: Tuesday Afternoon, 11 Feb 2003
Panel: Air Toxics
Presenter: Kathryn Sargeant, EPA National Vehicle and Fuel Emissions Laboratory
Topic: Air Toxics and NEPA: Emerging Issues

Background on mobile sources

There are 21 mobile source air toxics (MSAT). Some in yellow (greatest concern): acetaldehyde, benzene, 1,3-butadiene, diesel PM+OG, formaldehyde.

Different from other pollutants:

No AAQS.

Need to think about emissions, concentrations, exposure, and health effects.

Air Toxics and NEPA: Emerging Issues

Kathryn Sargeant
U.S. EPA Office of Transportation
and Air Quality
Air Toxics Center

Health effects

- No “safe threshold levels”. Any increase in exposure increases risk.
- Cancer, noncancer
- PM_{2.5} health effects: premature death, cardiovascular, respiratory, immunological effects.
- Diesel exhaust has cancer and PM_{2.5} effects.

List of Mobile Source Air Toxics

- | | | |
|----------------------|-----------------------|--------------------|
| • Acetaldehyde | • Diesel PM + OG | • MTBE* |
| • Acrolein | • Ethylbenzene* | • Naphthalene* |
| • Arsenic Compounds | • Formaldehyde | • Nickel Compounds |
| • Benzene* | • n-Hexane* | • POM |
| • 1,3-Butadiene | • Lead Compounds | • Styrene |
| • Chromium Compounds | • Manganese Compounds | • Toluene* |
| • Dioxins/Furans | • Mercury Compounds | • Xylene* |

*Found in evaporative as well as exhaust emissions.

Toxics controls

Reductions have been made already. Motor vehicle control programs have been motivated by criteria pollutants (ozone and PM). By 2020, on-highway emissions will go down by 67-94% (different for each of 5 pollutants).

Good progress, but still concerned about high-end exposures and hot spots. Particularly concerned about elevated pollution concentrations along roadways. Studies have shown elevated levels and adverse health effects.

Study: Health effects near roads

- Graphic compares benzene near homes with high vs. low traffic. A correlation exists. VOC levels indoors AND outdoors are related to traffic levels.
- Many studies exist correlating childhood cancer and proximity to roads. Also some studies show effects for noncancer effects.
- PAH's- Exposure during pregnancy. Study in Baltimore shows a correlation with traffic densities.
- Older people are at greater risk of cardiopulmonary death.
- Ultrafine PM is one of the pieces of the puzzle. Graphic shows X – distance from roadway, Y – particle number. Fine particles are higher near the roadway.

- Another study showed that children who live nearer to roadway have higher levels of ultrafines in their lungs.
- Summary: Evidence exists for concern about health effects.

Air Toxics Inside/Outside Homes

Question: Are the levels of toxics inside and outside homes the same? Answer: Graphic is based on single house data. Outside tends to be higher than indoor. Peaks match up in and out. Note that exposure models have “penetration factors” built in. Study in Fresno is looking at several hundred children across the city. They are looking at everything up to and including health effects (asthma symptoms).

Question: More about the in/out study. Which VOCs were monitored? Answer: Non-methane hydrocarbons. Not toxics?

Airports

Question: Focus on highways. Has the office done much with airports? Answer: Lots of activities from the regions and her office on airports. There is much interest in it throughout the agency.

Question: What about toxics? Answer: Data are available, but it’s limited.

Analyses of toxic emissions

We are able to estimate toxic emissions (mg/mile) from vehicles with MOBILE 6.2. MOBILE 6.1 is the model that does PM. Dispersion models yield air quality concentrations.

Exposure models- includes sensitive subpopulations, including children and the elderly, socioeconomic status, etc.

Risk factors exist so that risk can be calculated. Unit risk factors exist for all pollutants “except diesel exhaust.”

Portland Transportation Authority: For their toxics inventory, they used the CALPUFF model to get concentrations. This is the first example of toxics being modeled on such a refined scale.

Question: Regarding meteorological data, can you change the exposure by changing the time of year that you do the construction? Answer: Yes.

Diesel Particulates – Unit Risk Factors

Question: Is there a unit risk factor for diesel particulates? (MOBILE 6.2) Answer: Some states, such as California, have created unit risk factors for diesel particulates. EPA does not think the data are good enough. EPA did an analysis and concluded merely that diesel exhaust is “up there” with other pollutants that have a high risk factor.

Formaldehyde

Question: Region 7 has done a great deal of air toxics monitoring in the St. Louis area. Found lots of formaldehyde. Is this common nationwide? Answer: Need to look at NATA data. K. Sargeant does not think all urban areas have such high levels of formaldehyde, other than perhaps, Philadelphia.

Question: Region 7 thinks they might have found formaldehyde because they looked for it. Others may not have looked for it. Answer: This is true.

Thresholds for Health Effects

Question: Is there a threshold level for health effects? Or is it a smooth curve? Answer: There will never be a magic number saying something is “safe” under a certain concentration.

Impact of Toxics on Project Alternatives

Question: At what point can a NEPA reviewer reject an alternative based on toxics considerations? Answer: Unlikely that toxics alone would cause rejection of an alternative. However, air toxics is another angle that might persuade you in one direction or another. Part of it comes down to your definition of “acceptable.” Depends on the specifics of a project.

Question: Is there enough confidence in the toxics data to make recommendations against any certain project (all things being equal)? Answer: Lots of uncertainties surround risk factors, but regulators do make determinations based on that type of analysis. It’s a relative issue.

Comment: Different alternatives have different amounts of construction activity. This can be a basis of comparison among alternatives.

Question: Is it possible to distinguish between alternatives based on amount of traffic vs. risk. Answer: Yes, it’s pretty straightforward to come up with emissions that can be carried to risk numbers.

Comment: On using toxics to dismiss alternatives, many variables involved: must have people, closeness, etc. Need to analyze everything as a package.

Limitations of current tools

Can’t answer questions of most interest to neighborhoods. What am I going to be breathing? Is it safe?

We’re still learning about hot spot formation.

Risk communication issues are a problem. People don’t know how to quantify risk, and have different perceptions of risk numbers.

Question: Increased traffic? What does this mean? Larger volume of cars? Answer: Similar to issues for VOC’s. Additional VMT mean additional emissions. Some speed effects, but these are subtler.

Question: Does topography get into the modeling? Below/above grade? Answer: It’s possible, but most models come from research where the freeway is at grade.

What makes sense for NEPA?

- Can’t give bright-line answers.

- Can describe potential impacts, etc.
- What are the populations and sensitive receptors that are near the project?
- Compare exposed populations for each alternative.
- Is mitigation feasible? Is there a way to increase distance from populations?
- Diesel exhaust? It's possible to use highway fuel or ultra-low-sulfur diesel. Retrofits are available. Anti-idling policies. Reduction of VMT, etc.
- Descriptive narrative.
- EPA 1996 NATA (national air toxics assessment) is available on web.
- National scale assessment; be careful about extending it to local level

Summary

- Lots of uncertainties.
- Know that increased traffic leads to increased toxics.
- Reducing exposure is good.
- Evidence of hot spots and health effects on roadways.
- Basic consideration of issue could be useful and appropriate in many cases.

4. Notes: [Bob O'Loughlin](#), "Air Toxics Session"

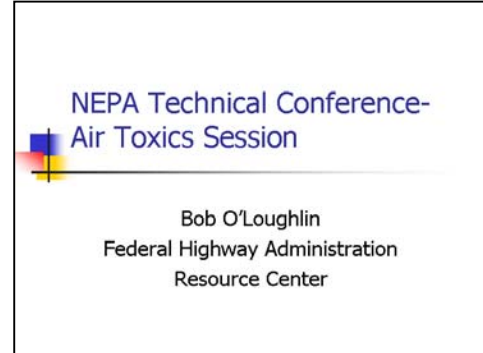
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| Date: | Tuesday Afternoon, 11 Feb 2003 |
| Panel: | Air Toxics |
| Presenter: | Bob O'Loughlin - Air Quality Specialist, FHWA Western Resource Center |
| Topic: | Air Toxics Session |

Mobile Source Air Toxics

NATA – 21 mobile source air toxics. Six of them account for a large percentage of the concentration.

Air toxics impacts have been raised as significant in AZ, CA, NV, WA.

NEPA or Title VI and Environmental Justice impacts are usually the issues.



Question: How did we evolve from 21 mobile source air toxics to the "big six"? Answer: 21 came from vehicles, health effects. Top 6 came from NATA rankings of national risk drivers. For example, some metals are on list of 21, but they have very small contribution. "Top 6" could shift based on evolving knowledge.

Question: (from Region 6) Big six air toxics? 40% by top 6; other 15 represents 2 %. What's the rest of the total. Answer: Represents on-road mobile. Analysis came from NATA (12/17/2002).

Question: Six of 21 mobile source air toxics have substantial contribution from non-road mobile source. What is the proportion of the total risk of the 21 that comes from the six that are predominantly mobile-source-related? Answer: Don't know. NATA did not do all 21.

Litigation

Lawsuit, US95. Sierra club claims that they did not address air toxics impacts of the projects. They filed the lawsuit 2 years after the ROD had been filed. Hearing a week ago. Expect to hear from the judge in a couple of weeks. EPA expects the judge to allow the case to go to court.

Question: Why is the Sierra Club suing the FHWA? Answer: The Sierra Club wanted some new information (new studies) to be mentioned in the EIS as a supplement. The FHWA was aware of the new studies (MATES-2, etc.), but didn't include them.

Question: Is the EPA implicated in the Lawsuit? Answer: No.

Question: Is the FHWA concerned about one court possibly driving FHWA's policy on air toxics issues? Answer: This would be one of the benefits of having a joint policy with EPA, because it would give the FHWA more power to do what they want.

Question: If court says it is no problem and Sierra Club is gone, then we cannot just let it go. Answer: Agreed.

Comment: It is interesting to speculate how much of this will be figured out in the courts. Policy moves so slowly, that the courts and public, rather than the science may decide the regulations and decisions.

MATES-II Study

MATES-II/CARB – mobile sources contribute 90% of excess cancer risk. CA uses elemental carbon as a surrogate for diesel particulate matter. They feel that diesel particulate matter accounts for 70% of all excess cancer risk. Even if you factor this (make the risk factor lower), diesel particulate risk would still be a significant factor.

MATES-II: three localized monitors that couldn't have picked up localized effects. Some were too far away (>200 m) and some were not sufficiently downwind.

Question: Where can people look at MATES-II study? Answer: We need to get link for this.

Action Item: Mark Brucker, EPA Region 9, will provide to group.

Other Studies/Research

Colorado - leukemia, risk/traffic density.

Barrio Logan in San Diego is the subject of many stationary source studies. Now including mobile sources as well.

FHWA research – air toxics and particulates. Looking at ability to transfer the results of these studies to highway applications.

Question: Studies do exist related to health impact from toxics, don't they? Answer: People are going to start using surrogates for what we really need: background concentrations, risk factors, excess cancer risk. Does it get you to a point where you can confidently tell the people what their excess cancer risk would be? We are not there yet.

Air toxics control

Control of air toxics from control of criteria pollutants? Benzene and butadienes concentrations reduced significantly already. Emissions of air toxics, including diesel particulates. This is due to reductions in emissions from traffic. Even though the traffic is increasing, the pollutant is getting less.

Air toxics is not being approached as a SIP issue. They're doing it outside of the SIP process to allow them flexibility.

Since MATES-I study in early 1980s, they have revised their estimate of excess cancer deaths in basin. SCAQMD is doing more advanced monitoring, modeling, and control measures than much of the rest of the country.

Health effect studies

Associate amount of traffic with health effects.

Sierra club- density-weighted roadway factor.

Mixed results. Suggested associations, but no bright lines. Problem is that the health studies either estimate exposures or they use small sample sizes. Also they use data from vehicle fleets of 1970s and 1980s, which is no longer relevant.

Comment: Baseline of all other cancer risk is used to compare risk from toxics

Diesel Risk Factors

Question: (from Region 8) Unit risk factor for diesel exhaust? When will we have something we can use for analysis purposes? Answer: Years. Many new epidemiological studies are going on. NIOSH is doing some work that could potentially give us something to work with in terms of potency. Basically, it's a longer-term issue.

Synergistic Effects of Air Toxics

Question: Do any of the toxics have synergistic effects when combined with other toxics? Answer: Currently it's broken out one-by-one. There's a lot we don't understand about risk factors and health effects. It's not something that's well-known.

Comment: Can't quantify non-cancer risks at all.

Observation: What about "hazard index" for acute and chronic non-cancer effects under the CA toxics hot spots program?

Air toxics policy

Comment: FHWA wants consistency from EPA, so they know what to expect. Response: A policy would be nice. Some regions are trying to champion the issue, so they may not be consistent with the policy.

FHWA recognizes need for short-term policy. Might be doing a joint policy with EPA.

Question: Does toxics policy exist? Answer: No policy exists. People are looking for a joint EPA/FHWA policy, and, not finding one, they go out and do what they think is best.

Comment: Another problem. If you don't have any analysis, and people ask for assurance that no cancer risk exists, and none exists, then that is bad. If we do not make any attempt to say something like "there is an increased risk and we think it is really slight", then people will not like it. Response: Yes, a policy will be good. Court decision on US95 (Nevada) will give us a good idea on what the court says. This may or may not be useful.

Oakland Airport

Comment: Oakland airport was a local issue. No toxics addressed in expansion of Oakland Airport. NEPA part dismissed by court some time ago. CEQA was not.

Comment: No toxics requirement to use MOBILE 6.2.

Question: Oakland Airport? Has there been any action taken by the airport sponsors in response to the court decision? Answer: Consultant was there. Complicated because there are so many sources.

Formaldehyde in St. Louis

Question: Toxics monitoring in St. Louis found high levels of formaldehyde. They do lots of analysis on CO, but they don't address toxics. Can we ask them to do analysis and/or mitigation on toxics. Answer: Trying to mitigate an impact that you can't really ascertain.

Comment: FHWA would like to get assistance from EPA in guidance for how to deal with toxics.

Comment: Sometimes EPA doesn't know what the solutions are. Suggestion that we just lay it out for the project proponents. For example, just say that St. Louis is finding high formaldehyde levels and here are the emissions from various sources, etc. Good idea to draft a general letter about problem, and ask them for help in figuring it out.

Environmental Justice

Question: What about environmental justice? Answer: No technical approach. General policy on Environmental Justice, but not pollutant-specific.

Transportation Planning

Comment: Transportation calls after TEA-21 fell apart with flux in regulations. OP lost most of their transportation staff.

Comment: Bring this up at the March 2003 transportation planning call.

Comment: Need to discuss this more within the agency. Need better interaction between EPA's Air and NEPA staffs. Also need to keep FHWA in the loop on these issues.

Toxics and NEPA

Question: Why not put toxics in the EIS? Reducing the toxics at all is good and increasing them is bad. Why not just put numbers in there? In the big picture, you want to reduce air toxics. Answer: We should put in the things that we really know. E.g., over time, existing and committed controls will reduce air toxics.

Follow-up: In terms of public disclosure, people have a right to understand what the risks are.

Comment: Conjecture is bad and not part of NEPA. It's not about probabilities.

Comment: NEPA term is "reasonably foreseeable."

Comment: Region 9 is getting lots of good information. Most other regions are not getting it. Region 9 wants to disseminate the information. Toxics information is not very good around the country. Need to raise the level of awareness. Best to start with good science.

Question: Do we have any examples where an agency has addressed toxics well in an EIS? Answer: LAX looked at acrolein. Not sure of status. Also, Santa Monica airport and Los Angeles school district.

Comment: Most people don't know how toxics are handled. They want to know what people have seen, regardless of agency. They want examples.

Rulemaking – Mobile Source Air Toxics

Question: Rulemaking on mobile source air toxics? Answer: CAA requires rulemaking. First effort was an anti-backsliding measure. Now there are more studies on controls (vehicle controls, non-road, etc... lots of things are on the table). Not expecting proposal on this until next year.

Comment: Workgroup has gone thru tiering exercise (people could sign up). Anyone from the regions can be involved if they want.

Question: If the rule for toxics has no threshold, how do we weigh the cost/effects of the rule against the benefits? Answer: This is a big difficulty with toxics. It's hard to monetize the effects an air toxics rule has on the people.

Air Toxics in SIP's

Question: Can air toxics get into SIPs? Answer: Nothing requires this. Only way it gets in would be voluntary. Charlotte, NC is working on/thinking about this. Probably not going into the SIP. Specific inventories are being built with MOBILE 6.2, so it's a natural thing that could be explored.

Conclusion - what do we know?

Controls: Over time, existing and committed controls will reduce air toxics regionally. Have been attempts at project evaluations. (Portland study will be interesting.) Build/no-build analysis related to air toxics is difficult.

Cancer Risk: In general, people want to know "what are the health effects?" Lots of fear related to anything having to do with a cancer risk. There is much pressure on people to come up with answers.

Comment: The "What can you do" segment is good. The FHWA would like to pass this information along to their people.

5. Notes: [Dave Stonefield](#), “Ground Level Ozone”

| | |
|------------|---|
| Date: | Wednesday, February 12, 2003 |
| Panel: | Ground-Level Ozone |
| Presenter: | Dave Stonefield, EPA Office of Air Quality Planning and Standards |
| Topic: | Ground Level Ozone |

Presentation Plan

How is ozone formed.
Precursors.
Standards.
1-hr.
8-hr.
Early action compact (new).

Ozone Primer

Good and bad ozone. Ground level, tropospheric ozone, causes damage. Stratospheric (15 km AGL).

Formation of ozone: NO_x and VOC are main precursors. Add sunlight and they react. In many parts of the country, ozone is just a summertime problem. Houston, for example, gets ozone violations all year long. Southern California too.

Equations are very complex. Main equation: VOC + NO_x + sunlight = ozone.

To form ozone effectively, you need some ozone in the atmosphere already. Some concepts for reducing ozone include catalysts on air conditioners and automobiles.

Sources of Ozone

VOC sources: fuels, solvents, trees (isoprenes – these are what make the Blue Mountains blue), etc. See pie chart for national emission averages. These vary by location. Houston has higher percentage of chemical industries (26 miles of chemical plants).

NO_x sources: power plants, construction, combustion, autos.

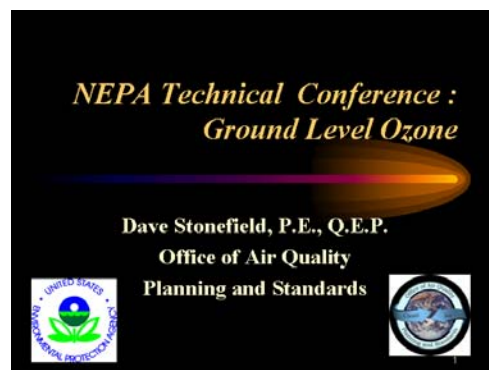
How Does EPA set NAAQS?

Two important documents: Criteria document, office of research and development. Describes effects of plumes, etc. Given to Scientific Advisory Board, which massages the data, etc, but doesn't give information to decision makers in a way they can understand. The OAQPS translates this into something the decision makers can understand. The Administrator makes the final decision on the standard.

Elements of an Air Quality Standard

Several components:

1. Level in atmosphere.



2. Averaging time. New ozone is 8-hour average; old ozone standard is 1-hour. Longer averaging, longer exposure time.
3. Form. Number of exceedances, whatever.
4. Compliance period. Three year period, one year period, etc. Old ozone is 4th highest reading over three year period. New one is...
5. Statistics. Rounding conventions, significant figures. 0.08 is the standard. If you're at or above 0.085, then you exceed the standard.

Nice chart on the two ozone standards in the slides.

Non-Attainment Areas

Areas that do not meet the NAAQS, or areas that are contributing to nearby nonattainment areas.

Non-attainment example

Atlanta MSA is nonattainment because the vehicles and industries are all contributing to the air pollution in that areas.

Area must be "designated"... per Sec 107(d)(1)(A)(i), listed in 40 CFR 81.

<http://www.epa.gov/oar/oaqps/greenbook>

Classes of Nonattainment Designations (1-hour ozone NAAQS)

Congress, 1990 Amendments. Higher classification, worse pollution, more control measures, more stringency, higher NSR offset ratios, longer time to attain. See chart.

Map of nonattainment areas. Would be nice to have a color version.

NOx SIP Call

Transport of nitrogen oxides. OTAG study... looked at the eastern part of the country and made recommendations to EPA. Ended up with the "NOx Sip Call" Need to reduce NOx across the regions in order to meet the standard. 18 states were given a cap on NOx emissions and were asked to reduce. Caps were calculated based on assumptions of emissions from power plants and other activities. Controls need to be in by 2004 (original deadline was 2003).

Benefits of 8-hour Ozone Standard

Question: What is benefit of going to the 8-hour standard? Answer: People's exposure to lower concentrations over 8 hours is more indicative of health effects than 1-hour standard. Chronic exposures occur more often than acute exposures. In theory, the 8-hour standard is more stringent than the 1-hour, but they are not that much different.

Classifications

Question: Are new classifications coming for the 8-hour standard? Answer: Old classifications were based on design values. New one will have new classifications. New classifications will be laid out in the proposed rule. Currently the notice is going thru OMB.

Control Measures

Question: Will there be different control measures? Answers: They will be the same because they are laid out in the law. States will generally look at more NO_x controls. NO_x SIP call is kicking in.

Question: More NO_x controls? Utility or transportation or what? Transportation controls are generally designed to reduce VOCs now. Answer: It will depend on the area. VOCs don't transport as far as NO_x, in general.

Question: Some areas have already put in lots of controls. Thought that EPA would be more flexible. Answer: Have to emulate Subpart 2, which has the control measures. If an area already ... Subpart 1 has more flexibility, and EPA tried to use it. Industry sued saying that it should be under Subpart 2 instead. Supreme Court agreed, and EPA is now using Subpart 2. Strangely, industry wanted the less flexible option

8-hour Attainment Areas in 1-hour Maintenance Status

Question: For areas in maintenance plan, and they meet the 8-hour standard, will they still have to meet the requirements of the maintenance plan? Answer: In theory, that should go away pretty quickly. They've talked about several options, but it's not settled yet.

Early Action Compacts

John Sykes, former director of OAQPS. People asked him how they could avoid conformity and NSR. He advised them to figure out a way to get back into attainment rather quickly.

Texas led way to this concept.

Areas commit to attain the 8-hour standard early.

Benefits: clean air faster.

Still designate the area as nonattainment, but delay the effective date until 2007. If the areas had made the commitment (by Dec 2002), and if they can show that they are in attainment by 2007, then they won't have to face conformity and NSR requirements. If they don't have a compact signed by last year, then designations will occur in April 2004 and conformity kicks in a year later.

Question: Why won't the EPA be sued on this? Answer: Environmentalists like the early reductions.

34 compacts were signed by deadline of December 31, 2002. Mostly in southeast, TX, etc.

Not in northeast or west because their concentrations are too high.

8-Hour Ozone Standard Timeline

- 1997: EPA promulgated new ozone standard in 7/18/1997.
- 1999: US Court of Appeals ruled against EPA on several issues, including method of implementation, etc. One issue was that EPA didn't consider the beneficial effects of ground-

level ozone. (May 1999) Turns out that ground level ozone doesn't have much beneficial effect because the concentration is much higher in the upper atmosphere.

- Catalyst for planes flying in ozone layer bring air into the aircraft so people can breathe it. Concentration of ozone would be too high without it.
- February 2001: US Supreme Court upheld new ozone standard. Ruled against EPA implementation approach. EPA had implemented under Subpart 1, as if it was an entirely new standard. Supreme Court said that ozone was already a standard and should have been implemented under Subpart 2.
- March 2002: US court of appeals upheld standard.
- Counties violating 8-hour ozone standard – see map. This uses 1999-2001 standard and won't be the data used for the designations. (It will be updated.) Things are expected to change, for example, the NOx SIP call will reduce NOx emissions. EPA believes that some of these regions will come into attainment because of this, and not much more will have to be done.
- Early 2003: Publish proposed implementation rule
- April 2003: States will recommend designations. (States have asked for more time and this might be delayed. However, EPA must designate by April 2004, per court order.)
- April 2004: Nonattainment designations. This is part of a court order and will be a pretty hard date.
- April 2007: Nonattainment area SIPs submitted.
- 2007-2021: Range of attainment dates.

Summary of Some Issues in the Notice

- Subpart 1 vs Subpart 2 areas: Which areas should fall under each one? Subpart 1 is more flexible on many things.
- Transition from 1-hour to 8-hour standard. Difficult to serve two masters. Originally, EPA said that the 1-hour standard would go away. Conformity doesn't kick in until one year after attainment. EPA doesn't want this to have a gap.
- Revocation of 1-hour standard.
- Anti-backsliding. Don't want industries just taking controls off because they no longer have to meet the ozone standard.
- International transport. (to and from the US). Also, it was recently found that emissions from China are affecting ozone concentrations in LA!
- Reasonable Further Progress: Subpart 2: Reasonable reduction within 6 years. In 9 years: combination of VOC and NOx controls. This is part of the 1-hour standard now, and is discussed in the notice for the 8-hour standard.
- Conformity –will discuss this later.
- NSR.
- Tribal issues and implementation.

More Information

See website. <http://www.epa.gov/ttn/naaqs/ozone/ozonetech/i3imp8hr.htm>

Question: Is the NO_x SIP call statewide? Answer: Yes, they are statewide caps. A few states were split up, including AL, GA, MI.

Question: NO_x SIP call must be in place until 2004. States signed compacts. What if the states don't meet the requirements? Answer: Then they get designated as nonattainment. Most of these are utilities, power plants, which already have contracts for the control equipment. There's a program in place, which is moving forward. Some controls can be done regionally to meet requirement and get into attainment.

6. Notes: [Bob O'Loughlin](#), "Ground-Level Ozone"

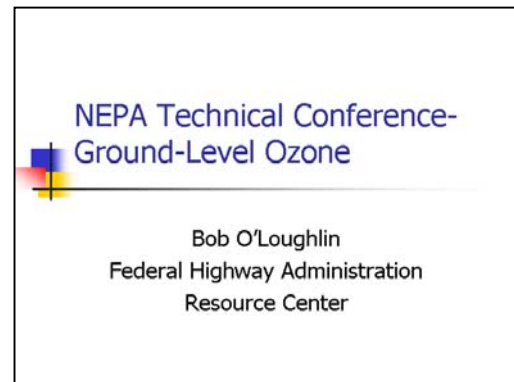
| | |
|------------|---|
| Date: | Wednesday Morning, 11 Feb 2003 |
| Panel: | Ground-Level Ozone |
| Presenter: | Bob O'Loughlin - Air Quality Specialist, FHWA Western Resource Center |
| Topic: | Ground-Level Ozone |

Review from yesterday

PM2.5 will be challenging for transportation agencies. He thinks the new 8-hour ozone standard will be a little easier for these agencies.

New 8-hour ozone standard

Revisions to Conformity Rule are expected to precede the implementation of the new standard.



Not sure what to do with request to address new standard in NEPA documents. Currently they have included the latest monitoring data. EPA has said that they'd like to use the 2001-2003 data, as long as it is available and has been quality assured by the time they need to implement. Agencies are putting most recent data, along with some statements about uncertainties that exists. Project sponsors are asking what the value of including this information is.

Comment: In order to do the appropriate environmental analysis in a NEPA document, you should talk about it, because that will be what you'll be dealing with when the project is occurring.

Response: Lack of guidance is somewhat troubling to the Project Sponsors.

Designations and final implementations

What do we do during the 1-year grace period for conformity? FHWA expects to get some comments from EPA. They want to work with EPA to discuss how they're supposed to deal with this. There will have to be some speculation in environmental documents. It would be nice to have some direction. Consent decree says that the EPA will do the nonattainment designations by April 2004. The states are looking for more time. Implementation policy has to come about, etc. Lots of uncertainty exists.

Conformity challenges: 1-hour vs. 8-hour attainment

Possibility exists that EPA will revoke the 1-hour standard. This allows areas that are in maintenance for the 1-hour standard and meet the 8-hour standard to avoid conformity (e.g., Monterey, CA). Under other options, these areas would continue to do conformity.

Conformity assistance – New nonattainment areas

Areas that were not doing conformity under 1-hour standard and are not meeting 8-hour standard are going to need help doing conformity. This will include small metro areas (e.g., Redding, CA) and some

rural counties. Looking at technical capabilities. Rural areas don't have an MPO to do conformity, so they'll have to use the state DOT. FHWA are trying to help them get their technical capabilities up to speed. He recommends that EPA be aware of the possible limitations caused by this inexperience. This is going to be difficult for the Federal Agencies due to limited resources, travel, etc. It will be a lot of work to educate the people. Also, public involvement will be a challenge because this will be pretty new as well.

What if they run into a conformity problem? TCM's and technological controls will be less feasible. Ability to take on a technological control will be limited.

Metropolitan areas have a 20-year plan and transportation improvement plan. Rural areas don't have these in place. Under the planning regulation, the allowed states to do plans that were not project-specific. So in the rural areas, they have only projects that are in first 3 years. The question is how will they get a 20-year analysis if they only have 3 years of projects.

Compacts

Question: Has FHWA been involved in any of the compacts? Answer: No. Bob O'Loughlin was not aware of the compacts. Answer (from Stonefield): Local governments are handling the compacts, not transportation agencies.

Timing

Question: When are the SIPs due for the 2003, 8-hr Standard? Answer: 2007

Question: Does FHWA have a timeline on when to start? Answer: As soon as they can. Only uncertainty is what tests they'll have to apply.

Lessons learned: Experience with Conformity

Experience of doing conformity in last decade shows that there is a learning curve. Law 1990, guidance 1991, regulation 1993. Challenges were not resolved until mid-late 1990s. We should expect similar problems for these new areas. Not as many resources available on fed and state levels. This will be challenging and will require a concerted effort.

Question: Is this an east-west problem, when you are not really adding much in the west. Focused on eastern half of the country. We have been dealing with rural counties in PA, for example. They had to ramp up in the learning curve, but it works when the DOT's take the time to work with the communities, and involve them in the process. It's a lot of work and a challenge, but everybody understands it. This is on the stewardship side. NC State is looking for professionals to have expertise in these areas that can go out and deal with this. Center for Environmental Excellence (under AASHTO).

Comment: Most states are used to conformity. New areas in MS, AR, OK, MI (some maintenance areas). Most growth is in the southeast. States like NC are trying to teach themselves based on the areas that are already nonattainment. Conformity is similar to what it is now, i.e., is it in the TIP (Rudy Cavenchack, OTAQ). Areas can go for years and not have any new projects in rural areas. So they don't have to do conformity. Time is a benefit. Vehicle turnover helps to mitigate the emissions when the project is actually done. Response: Really not a difference between east and west. Most areas will indeed not have any projects, but the challenge will come when they do have a project.

Question: Is Conformity comprised of technical issues? Answer: Most of it is technical assistance. Technical test is uncertain until Conformity is revised. Different parties do it under the MPOs. Now state DOT's and local areas will be doing it.

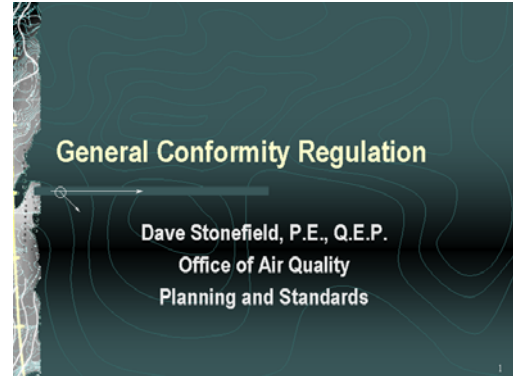
Question: Will there be problems with new areas coming up with forecasts and growth projections? Answer: The issue is handled at state level. Many of these rural areas are low-growth, so they will rely on state assistance.

7. Notes: [Dave Stonefield](#), “General Conformity Regulation”

| | |
|------------|---|
| Date: | Wednesday, February 12, 2003 |
| Panel: | General and Transportation Conformity |
| Presenter: | Dave Stonefield, EPA Office of Air Quality Planning and Standards |
| Topic: | General Conformity Regulation |

Latest court decision on general conformity.

Ninth Circuit in CA, judge ruled that federal motor carrier safety administration in promulgating its rule allowing Mexican trucks to travel thru the US did not do an adequate NEPA or Conformity analysis. Remanded it back to the agency, which must analyze the effect of the emission in nonattainment areas. In NEPA, you analyze and at the end, you can say that the project must go forward per NAFTA, etc. If it does not meet conformity, however, the project cannot go forward.



Background

Conformity added to CAA in 1977. Applied only to Transportation.

Congress reinforced it in 1990. Added other things (general conformity), including airports, defense, national parks, BLM lands, bureau of reclamation lands, etc. Anything that the federal government is involved with.

Rules promulgated in 1993.

Purpose of Conformity Rules

Ensure that federal actions will not interfere with the SIP (state's ability to meet the AQ standards). Specifically, it's the NAAQS.

Foster communications between state/local agencies and the federal agencies. Previously, federal agencies ignored them, other than perhaps a NEPA analysis.

Allows public to participate in the review. Military had concept of sovereign immunity. Now they can be sued by the public. They don't like this much.

Allows for project level, public review.

Basic Implementation Principals

Federal agencies make their own determinations.

EPA, states, public, MPOs can comment on the draft. Federal agency must respond, but they make their own decisions. EPA always has the opportunity to comment. (Surf Board... EPA commented. Trains went into nonattainment areas...)

Fed agencies can be sued. This has happened to FHCSA in CA, to BLM, to Navy, etc.

General Conformity Evaluation

- Applicability requirements.
- Conformity determinations (if the conformity regs are applicable).
- Procedural requirements (involve public participation, etc)

Applicability

Conformity only applies in nonattainment areas. 1995 highway act eliminated 55 mph speed limit. Applied to nonattainment/maintenance areas only. The EPA was in the process of coming up with the regulations for conformity in attainment areas at the time, but then (someone) decided not to do it.

Emissions are evaluated against de minimis levels. Thousands of actions are occurring every day. If emissions are above de minimis, then you need to do something. If emissions are below, then no need to do more. Emission thresholds depend on attainment status. See table in regulations. This eliminates most federal actions.

Exempt Actions

Exempt actions include various categories, including regulatory activities. Judge in California said that you don't have to do conformity for writing the regulations, but the substance of the regulations is subject to conformity.

Question: Corps of Engineers, dredge and fill operation and the resulting emissions. Answer: Yes, this is subject to conformity. Dredge and fill in NY harbor.

Transportation vs. General Conformity

Transportation conformity only covers operational emissions. General conformity includes construction emissions as well.

Question: Go back and explain relationship between general and transportation conformity related to projects, like airport expansions. Answer: Airport wants to add another runway, and add N flights per day or whatever. (Sometimes, adding another runway actually reduces emission, by eliminating the backup. Takeoff and landing modes are calculated in minutes. Waiting on runways takes hours and adds to emissions.) If DOT is building a new access road into the airport and they include it in the TIP under transportation conformity, then that doesn't have to be included in general conformity.

Question: What about the trips. Answer: You can't escape having to do conformity for the people traveling to/from the airport. Generally, they'd go under transportation conformity. If the expansion allows for an extra 1000 trips per day, then it's captured under transportation conformity. If they are adding an access road then it is included in the TIP. If the access road is already there and you bring in a

new wing, adding more trips back and forth, then you add that. It is considered a regionally significant project, and you add it to conformity. Say that the emissions are added and the MPO has already taken it into consideration. Basically, you don't count something twice.

Question: As long as the trips are included in the transportation plan, then the agency would not have to include them in the conformity analysis? Answer: If included under transportation conformity, then you don't include them, even when calculating de minimis.

Comment: Project in Bay Area. Caltrans was expanding a bridge. Coast Guard works under General Conformity, but Caltrans is used to doing things under transportation. MPO modeled expanding the bridge and "cleared" it under transportation conformity, even though the Coast Guard was the lead agency under General Conformity.

Presumed to Comply

Agencies can create their own list of actions that are "presumed to comply". Specific language in rules specifies how to do this. In 10 years, no agency has come up with a list of presumed to conform actions. FAA is coming up with something. For example, how much runway can you paint before triggering the rules? (e.g., 20,000-foot runway).

Total and Direct Emissions

Applicability requirements cover total direct and indirect emissions.

Indirect emissions happen later in time. Must be under a continuing program responsibility of the agency. The agency must have the ability to control the emissions. The indirect emissions also must be reasonably foreseeable. Must be able to calculate the emissions. Example: Base closure. Moved wing into another area. Continuing program responsibility says you calculate emissions of people commuting to the base, planes, fleet vehicles, etc. But fact that you move someone from Florida to Virginia (Norfolk Navy Base) and they go out shopping on the weekend, ... these emissions are not controllable by the agency and are not included in the indirect emissions under conformity.

See flow chart in slides.

Conformity Determinations

If the action exceeds de minimis and is not exempt, then you must to a conformity determination. If the emissions are explicitly included in the SIP, then they conform. If the state agrees to put the emissions into the SIP, then they conform. If the state wants a federal project to take place. Example: Wing that moved from FL to VA. State said they would be included in the SIP. This is now an automatic SIP Call and they must submit a revision to the SIP.

Mitigation

Reduce emissions at the facility or purchase offset (nonattainment areas only).

Air Quality modeling

Can't do for PM10 and SO2. Cannot increase the frequency or duration of the violation of the standard. See flow chart.

Provisions of 93.158(a)(5)

Areas, post-1996, state can determine that the action/project is within the SIP. Above, "Project X" is included in SIP. In this case, state sends a letter saying category / off road emissions are 100 tons per year. State says this is included in the construction emission budget. This is one way of demonstrating conformity.

Areas without an approved post-1990 SIP. Look at baseline and say that the emissions won't be above the baseline.

Emissions can also be included in a TIP or transportation plan from an MPO. This can also be a demonstration of conformity.

Procedural Requirements

Federal agency must make a draft conformity determination. Within 30 days, must send to EPA region, state/local AQ agencies, fed land managers, MPO, public. They must later notify all these people that they've made a final determination.

Draft determination: 30-day review. Draft available to public for 30-day comment period.

Effects of EPA comments

Question: What leverage does EPA have when they comment on a conformity determination. Answer: In theory, the EPA can sue, however; only in rare cases will the government sue itself. The EPA doesn't have any other recourse other than writing a letter of disagreement; it's the state's responsibility to include emissions. It's the EPA's responsibility to verify that the project doesn't get in the way of the state meeting the SIP.

Question: Regarding Federal Agencies providing false evaluations, can the EPA go to the state and say anything about it? Answer: Corps of Engineers has made a policy statement, saying that they are responsible for the emissions from their activity. Harbor dredging is classic example of where they draw the line. Dredging to depth of 45 feet. Taking materials out to two locations. Take out and dispose to land. Contract was to dredge the material and haul it away, saying that they had no authority where it would be dumped. Some materials were taken out to sea and dumped into a Corps of Engineers authorized dumping ground. They decided that these emissions would be counted.

Followup: What is EPA's recourse regarding Federal Agencies providing false evaluations? It does not seem like enough just to write a letter. Answer: It is the state responsibility to accept the emissions. If under conformity, then EPA takes responsibility, otherwise, it's up to the state to control the emissions. The state, theoretically, has already included these other emissions in the SIP. General Conformity prevents the Fed government from taking actions that interfere with the NAAQS. If the Corps wasn't dumping in that landfill, then someone else would.

Follow-up: Should EPA have to go out and do the analysis on each individual flood control project to see if that is the one project that will interfere with the standard... lots of room exists. But with all the indirect emissions that the courts are unwilling to evaluate, when taken as a whole, these could interfere with the NAAQS. Answer: Setec Airport. Calculated emissions for trucks hauling materials onto the property. Corps of Engineers has made their argument. If someone sued the Corps and the Corps lost,

then they would have to change the project. They are supposed to take responsibility for the emissions.

Question: Does the determination have to stand across the country? There are a number of arguments that can be made against it. Answer: Don't know. Corps has historically had to ignore their indirect emissions. True that statute says you don't cause a violations. If in compliance with rule. And not indirect emissions because you can't control them, then not covered. State can't go back to the Corps and say that they caused the emissions, so you have to go back and reevaluate it.

Follow-up: Does EPA still have to stand by this determination? Answer: It's case-by-case, but EPA set a precedent, even though it was politically motivated, and this will come up in future cases.

Effectiveness of General Conformity Regulation

Question: Big picture. Do you think the purpose of the Conformity Determination regulations is being met? Answer: We are on the way to making that goal. The rules are not perfect. Rules changed when they went thru OMB. EPA had some more aggressive regulations, but OMB cut them out, based on DOD-proposed exemptions. EPA did not have a defense for the long list of things that the DOD said was exempt. Nobody looked at the actual emissions, and EPA was forced to make them "de minimis". Not like "presumed to conform". Long list of exemptions in the regulations are "fact" and are out, no matter what. If you fit under the language of the exemption, then you have to eliminate the action, regardless of magnitude.

Answer: Cumulative emissions are not addressed. There are requirements regarding segmenting the actions. If you have 15 actions within a year, you have 15 de minimis.

General Conformity Revisions

EPA is just starting to revise the General Conformity rule. They are thinking about streamlining the rule so that the agencies can develop an emission budget in conjunction with the state/local agencies. New projects will then look at the budget to see if they are in conformity. If airport is staying within the budget and adding a new runway, EPA is looking at streamlining that process.

Question: The General Conformity Rule seems rather cumbersome, and it is important to implement appropriately. Are there actual environmental benefits? Answer: Biggest success is in de minimis rule. Agencies scramble to make their actions de minimis. DFW airport: electric tugs. Military bases: All sorts of emission reductions. Purchase of aircraft by military: Paper discusses this. Although the rules exempts purchasing. E.g., JSF reduce NOx at a base, and then if it's under de minimis, then they don't have to do conformity. It's really turning out to be a pollution prevention effort.

Comment: Also, more federal agencies are going to the state/local to talk about their proposed projects.

State Conformity Requirements

Question: Could a general conformity SIP throw out some of the exemptions if they could demonstrate that they are discriminating against certain federal agencies? Answer: Sovereign immunity was not waived in CAA. (Despite three pages in CAA about conformity with federal actions.) States cannot impose any additional requirements, other than what's in the statute. States can have more stringent conformity programs provided that they apply to nonfederal and federal action. Every action in the state, by any private party. Not just "as written" but also "as applied".

Emission Reduction Commitments

Question: What are the commitments that need to be made? What if we went to DFW and did not see electric tugs? Answer: If they did it before they got to the conformity determination, then they have not done one and that is okay because they are de minimis. If you discover later that they have emissions that are greater than de minimis, then they have to go back and do a conformity determination. Other situation is when you actually do a conformity determination and you get commitments to reduce emissions. In that case, if you make the commitment, you have to comply with it.

Comments. 40 CFR 51.860 (tells state what they have to have in their SIP); 40 CFR 93.160 (mitigation)

Conformity and NEPA

Question: If they have all those things in their Conformity Determination, should they also present this information in the NEPA determination, FONSI, or ROD? Answer: Yes, they should document it if they think they're going to get sued. Need to have a record of what they did.

Documentation of De Minimis Actions

Comment: If it's below de minimis, then there doesn't have to be any paperwork at all. If, however, it's a controversial project or one that is close to the de minimis levels, then it's a CYA action to put something in the documentation to cover them. Example, gravel being sold by BLM; stopped it for over a year. No conformity determination. Had to go back to do the calculations and add 2-3 lines in the record.

EPA Guidance Documents

July 13, 1994 - Question & Answer guidance.

Oct 1994 – guidance related to state evolving funds, etc.

Some letters to/from EPA, interpreting the regulations.

Sept 25, 2002 – EPA/FAA put out a joint document regarding the application of General Conformity to airports.

Website: <http://www.epa.gov/ttn/oarpg/genconformity.html>

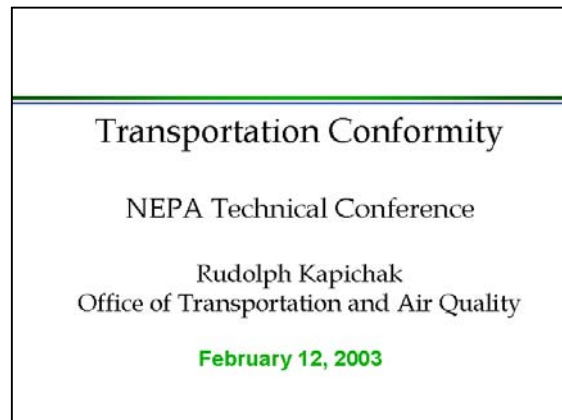
8. Notes: [Rudy Kapichak](#), “Transportation Conformity”

| | |
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| Date: | Wednesday, February 12, 2003 |
| Panel: | General and Transportation Conformity |
| Presenter: | Rudy Kapichak, EPA National Vehicle and Fuel Emissions Laboratory |
| Topic: | Transportation Conformity |

Levels of knowledge in room range from 1-5.
(Comment: It's negative for people who think they know, but are wrong.)

Conformity

CAA 176(C) ensures that transportation projects in nonattainment and maintenance areas will not cause any new or contribute to any existing violation of the national ambient air quality standard for ozone, carbon monoxide, nitrogen dioxide, or particulate matter. Revisions to the conformity regulation are being written to include PM_{2.5} and 8-hour ozone.



Why is conformity important?

Protects public health.

During the 1970s-80s, there was a disconnect between Air Quality and Transportation Planning. Conformity gets them together to talk about transportation planning. Ensures that new data (vehicle fleet, forecasting, etc) are the best and up-to-date.

Conformity is a bridge between the SIP and transportation plan and transportation improvement program (TIP)

Question: Are TIPs required by law? Answer: Yes, for Metropolitan areas, in order to get their highway funding.

Question: Is there a particular location of money (type of money) for transportation conformity?
Answer: In general, transportation conformity applies to projects funded or approved by FHWA or FTA.

SIP Budgets

Conformity enforces the SIP budget as a ceiling

The SIP allocates emissions amongst the various source categories (mobile, on-road, off-road, stationary).

Creates emissions budget for certain years. The MPO must show conformity to this budget.

Comment: They [the States] prepare the inventory and impose certain requirements. If the MPO goes over the budget in the SIP, it's up to the MPO and state to work together to change things. There's a ceiling on

mobile sources. It requires that emissions be met, as opposed to requiring controls. Pre-1990 SIPs had control measures

Comment: In some cases, the VMT growth was much greater than what was projected. The report language for the 1990 CAAA mentioned how the large growth in LA contributed greatly to the bad air quality.

If a nonattainment area does not have a SIP budget, they look at 1990 levels (are emissions less than or no greater than 1990 levels), or they look at build/no build tests, comparing emissions either way.

Transportation vs. General Conformity

Transportation conformity applies to FHWA and FTA (transit) actions. OTAQ is lead.

General conformity OAQPS is the lead (Dave Stonefield). Includes airports (FAA), railroads (FRA), defense facilities (DOD), because they are not included in the mobile source budgets.

Comment: 1970 CAA already had conformity (called consistency) and they were already doing it.

Comment: Transportation conformity. Does it involve a particular kind of money? Federal transit.
Answer: Comes out of Title 23 (federal highways and federal transit) and in cases where FHWA and FTA have approval authority. Comment: Some of the money for a particular set of projects in Region 2 came from FEMA through FTA. Follow-up: Conformity regulations say, "funded under," so it could have been covered by both.

Discussion over whether "the project" or "the money" determines whether a something is covered under General or Transportation Conformity. Regulations appear to be in conflict. If Transportation Conformity covers it, then it's covered by General Conformity. If it's the train or subway, then it's Transportation. If it's the ferry, then it's General. Ferry emissions could be included in the SIP emission budgets if it were for commuters. Amtrak would not.

Transportation conformity covers only on-road mobile sources. Also, in PM10 nonattainment and maintenance areas, fugitive dust from transportation-related construction projects must be included in regional emissions analysis if the SIP identifies these emissions as contributing to the air quality problem.

Actions covered by conformity

- Transportation plan (20-year timeframe)
- TIP (3-year timeframe)
- Federal projects receiving TEA-21 funding or FHWA/FTA approval
- Regionally significant non-Federal project, must tell the MPO so they can include it in their analysis.

Question: What makes something regionally significant? Answer: It's in the regulations, and the interagency consultation group for the area has input on the final decision.

Question: Do they just pick some projects to perform Conformity Determinations? Answer: No, the whole transportation network is included in the regional emissions analysis, which is the basis of the decision of whether or not an area is in conformity or not. But some actions are so small they are not explicitly modeled, if the region is really large.

Who is responsible for conformity?

MPO is responsible for conformity in any area with population greater than 50,000.

State DOTs (or county planning organization) are responsible for projects in isolated rural areas. They don't have TIPs and plans, so they're not subject to conformity unless they're doing a new project. Study on rural areas is being done and should be out shortly.

USDOT (FHWA and FTA) approve the MPO or State DOT determination.

EPA is a member of the consultation group. They also review the SIP and make the determination that the conformity emission budgets in the SIP are adequate.

Consultation is necessary among MPOs, state/local air and transportation agencies, EPA, DOT.

When is conformity required?

- When new transportation plan or new TIP (or amended).
- Every three years
- New TIPs are required every 2 years.
- Conformity regulation – within 18 months of certain actions.

Conformity Lapse

A Conformity Lapse occurs when the Transportation Plan or TIP do not conform on schedule. An area cannot adopt a new project during a lapse. You can finish the project phase you are in, but cannot proceed further.

To get out of a lapse, you change your TIP or plan, or get air agency to change the SIP, or just finish the work on the TIP, plan and or conformity determination (if it's been delayed).

Projects that are exempt from conformity – see two lists at end of regulation.

Areas don't really lose money when they are in a conformity lapse. They get full funds, but cannot spend funds on new transportation projects. They might lose some time.

Comment: EPA doesn't "cut off" the funding. Funding isn't cut off.

Comment: Approval authority by DOT stops. The money is there, but it can't be spent on certain projects [new transportation projects]. Example: If you planned to approve a widening project in July but went into a lapse in June, then you can't go forward with the project.

Comment: EPA doesn't put its foot down. It's DOT. However, it's EPA's regulation. EPA doesn't bind conformity, we just comment on it. FHWA and FTA have the responsibility to send out the letter saying an area is in a lapse. Funding does not cut off.

New nonattainment areas

EPA to designate 8-hour nonattainment areas in April 2004. Also will designate PM_{2.5} areas as nonattainment in December 2004.

These events trigger a 1-year grace period for conformity.

What has to happen? MPO's must have a conforming TIP and Plan at the end of the grace period. They are also subject to all the schedule and frequency requirements at the end of the grace period.

Plan: Get revised conformity rule finalized at beginning of 2004.

Project-Level Requirements

Must be a current conforming TIP and Plan in order for a project to be approved. Isolated rural areas must do a conformity determination.

Projects must be in the conforming TIP and Plan. Need to look for them.

Project level conformity only applies to FHWA and FTA projects.

Hot-spot analyses: CO, PM₁₀ areas

Two sections of rule (116 and 123) talk about hot spot analyses. Analyses have to take into account background concentrations.

Comment: If no approved CO SIP (e.g., LA), then you must show that the project decreases the nonattainment. LA couldn't figure out how to conform.

Question: Is Hot spot analysis in CO non-attainment and maintenance areas done in other places?

Answer: That's under NEPA to show that the project does not exceed the NAAQS, and to show that the project does not have a significant impact in the area. This is NEPA, not CAA. What standard? Not a compliance issue with CAA. It's an impact issue. You are using the Air Quality standard like a reference for significance. It's the most defensible thing that we have. Conformity doesn't apply in attainment areas. People don't often see the difference. There really aren't any other standards other than the NAAQS. They are used as guidelines, but it's strictly related to the impacts on Air Quality.

Hot Spot Analysis Requirements

In CO nonattainment and maintenance areas: location must be identified in the SIP; affect LOS D or worse; or affect top three intersections with most traffic volume or worst LOS.

Modeling analysis

Question: If in attainment area, and you do CO hotspot analysis, and you go from D to E at a certain time, you'd go to mitigate because you have a significant or adverse impact, which means you have to start monitoring there, which could throw the area into nonattainment. *Comment:* So an adverse effect could trigger an exceedance in the area, which triggers mitigation. *Comment:* They know it'll be a nonattainment area, so under NEPA they go through all this knowing that it'll be brought up. Thinking in CAAA 1990 was that the two laws would come together. It brings about communication. *Comment:* Idea is to avoid the issue (or order up some good weather).

Quantitative hot-spot analysis guidance has never been released for PM10 areas. Agencies do a qualitative analysis. FHWA released guidance on qualitative analyses in 2001.

CO and PM10 Analysis

CO or PM10 analyses: don't have to look at temporary emissions caused by detours or by narrowing the roadway from three lanes to two, etc., as long as these impacts are 5 years or less at a specific location. This only applies to "project level" conformity. The rules are different for regional conformity analysis. Also, these emissions should be discussed in the EIS. (Usually, it's qualitative analysis.)

EPA conformity website

<http://www.epa.gov/otaq/traq/>, Click on conformity.

TIP vs. SIP: Issues of Timing and Coordination

Question: For new 8-hr ozone, designation in April 2004, SIPs are due in April 2007; need to have conforming plan and TIP by April 2005. How do we get a conforming plan and TIP without a SIP?

Answer: Two other tests for regional emissions analysis when you don't have a SIP. One is the less than or no greater than test. If your emissions are less than or no greater than emissions in a base year, then you're okay. There's a 2002 guidance memo, indicating that 2002 will be the new base year. New conformity rule will say this. Inventories will be submitted in 2004. Mobile sources could be completed earlier because it's essentially a modeling exercise. Stationary sources could be later because they include site information, etc. 2002 is one of the years of air quality monitoring data that will be used for the attainment designations. Second test: Build versus no-build analysis. Are emissions greater when something is built or when it isn't?

Question: No baseline? Answer: You create one with the no-build analysis.

Question: 1990 emission inventory or 1990 VMT inventory? Answer: It's the 1990 emission inventory. Example (Stonefield): General conformity at Miramar used 1990 because they were ramping up for the gulf war and the emissions for the 1990 vehicles were higher than present. They overestimated the emissions inventory.

Comment: 1990, they only thought of the two tests. Now, there are 1-hour SIPs that have budgets. Can they use it for 8-hour SIP? Answer: The revised version of the conformity rule will address how 1-hour ozone budgets may be used in 8-hour nonattainment areas.

Comment: PM-2.5 and 8-hour ozone nonattainment areas have a little more than a year to make their first conformity determination, because the time period runs from the effective date of the designation.

Question: Interim period, 2-3 years. Any thought on how to state in NEPA documents that it comes from a build-nobuild analysis or whatever. Answer: It's still regional vs. project at that point. In an EIS, project level conformity and air quality impacts must be dealt with, but it's really a go or no-go decision. EIS wouldn't address it any further.

Comment: If you have a project that won't go into construction by June 2005 and the area doesn't have a conforming TIP and plan, then the area is in lapse and nothing will happen anyway.

Question: How would conformity be addressed in NEPA documentation that are done during the grace period? Need consistency across EPA regions and FHWA divisions.

Question: How are we evaluating? Answer: You can't evaluate regional conformity in an EIS. You can tell the story and where you are, but you cant do a conformity analysis. Another Answer: It doesn't have to be included, because conformity doesn't apply during the grace period. If the plan doesn't conform, then there is a lapse.

Comment: Region 3 air quality put in document (before the ROD), that there's a statement that there is a conforming plan.

Comment: Suggest saying that the area is nonattainment for CO and 1-hour ozone. Anticipate that it'll be nonattainment for 8-hour ozone and PM2.5, but it's not yet. When it does, the MPO will do all they can to get the plan to conform.

Comment: Project concept – recycle the design and redo conformity.

Comment: Also suggest saying that the MPO has scheduled starting their conformity revision for a certain date and that they plan to finish on a certain date.

Question: Design concept and scope from NEPA must be compared to those in the plan. If they aren't the same, then you can't approve the project.

Conformity and NEPA

Question: Relationship between conformity and NEPA requirements? When do you have to fulfill your obligations for conformity as part of the NEPA process? Answer: Need to meet the conformity requirements to be in a conforming TIP and Plan. Policy (FHWA): They will not sign a FONSI or ROD until conformity is not determined (regional or project-level hot spot).

Comment: Important to say that it's not in agreement with FHWA policy.

Action item (suggested): Lamar could write a memo to Pat. Or maybe the FHWA already has a policy memo.

Policy (EPA): Can't do a general conformity determination until you select a final option (proposed action). Conformity is only done on the proposed action. General conformity sometimes is done at a later date, if the project goes over several years. EPA considers lapse if there's not a 5-year time period.

Comment: No time limit on re-evaluation. NEPA doesn't require them.

Comment: When EPA did general conformity, they knew they didn't understand all the types of federal actions that would fall under general conformity. EPA encouraged people to include conformity in their NEPA analyses, but did not require them to make an actual conformity determination before the EIS was finalized.

Comment: FHWA guidance said that conformity determination needed to precede the final EIS. Region 4 went with this (in Atlanta), because they didn't want to get into a grandfathering situation. That's how it was integrated in their process. It wasn't a rule, but they found an appropriate way to streamline it.

Question: FHWA needs conformity in place before the FONSI or ROD is signed, right? Answer: Yes.
Follow-up: What if ROD precedes designation? Would this trigger the need for supplemental ROD or whatever? Answer: No, supplements reserved for significant issues. Good to discuss it under air quality impacts, and acknowledge that the situation exists. Documentation must accurately tell the story of the situation.

Contact numbers in OGC.

sara.schneeberg@epa.gov, 202-564-5592. OGC contact for transportation conformity.

OGC general conformity contact:

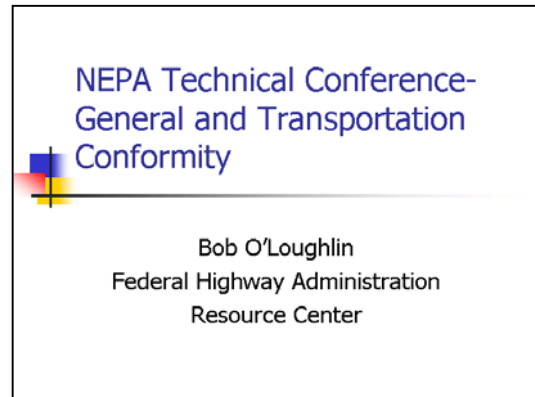
alex.schmandt@epa.gov, 202-564-5522.

9. Notes: [Bob O'Loughlin](#), "General and Transportation Conformity"

| | |
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| Date: | Tuesday Afternoon, 11 Feb 2003 |
| Panel: | General and Transportation Conformity |
| Presenter: | Bob O'Loughlin - Air Quality Specialist, FHWA Western Resource Center |
| Topic: | General and Transportation Conformity |

Transportation Conformity – Regional

Learning curve, experiences... See study sponsored by EPA/FHWA, Harvard University. Looked at 15 nonattainment areas. Found 6 problem areas: emission tests, modeling procedures, TCM implementation, fiscal constraint of TP programs (from FHWA planning and conformity regulations), SIP failures, and human failure (just can't get plan updated in 3-year cycle and lapse occurs. Experience based on what happened in early 1990s (at bottom of learning curve).



Conformity Lapses

Now: Seven areas had lapsed conformity around the country, more than half of which didn't have any problems. Small areas, most projects are exempt from conformity anyway.

Reasons for lapses: three areas missed conformity deadline (human failure); two areas had inadequate budgets (SIP failure); San Francisco, court put a stay on the adequacy finding (SIP failure or litigation); 2 areas had really old SIPs, old budgets caused disconnect.

San Francisco history: Bay Area has 28 TCM's. Additional four in new plan, not yet approved. This is more than most places. Original 28 go back to the 1982 SIP. They've been doing timely implementation on conformity. TCM 2: area would increase transit ridership (1983-1987). MPO and air district had always assumed that this was a goal and not a commitment. They were sued and the courts ruled that it was in fact a commitment. Their current TIP has the 15% back into it and the courts are reviewing it. Transit ridership is usually influenced by gas prices. Right now they're around 10%; projections show they'll have 15% by 2006.

Six other areas: Searles Valley, SF Bay, Utah (Provo), Billings and Missoula, Montana. – Check the FHWA website under AQ planning/conformity.

Where SIPs and RTP/TIP are consistent in their assumptions, MPOs routinely have met conformity requirements.

Where SIPs are updated more frequently, assumptions are more consistent.

Question: If you do the SIP with the new budget, you get a higher budget. How does this affect antibacksliding? Answer: California is revising their entire SIP, for mobile and other sources.

Comment: Tier 2 applies to 40 states; all except CA and those that have adopted CA standards. As soon as MOBILE6 is released, the SIPs must be updated right away. 12 areas have made commitment to remodel with MOBILE6 (these are areas with worst ozone problems).

MFAC 2002, the California model., is expected to be approved by April 2003.

Human error (inability to update every 3 years). Made worse by added complexity. Need to look again at whether or not the 3-year cycle is still reasonable. Does it need to be changed?

Question: Nothing has been done to increase leverage/ability of MPO's, given their additional responsibilities. Is anything being done to make the power fit with the responsibilities? Answer: Goes back to balance between local and state level power. It's a continuous battle for power, and Congress has to balance it in some way.

Question: Does DOT have ideas about this? Answer: Yes. In the end, certain interest groups tend to dominate.

Comment: MPO's are now asking for more money. Right now, they get 2%, and it's thought they need more.

Project-Level Conformity

Seeing decreasing CO levels. All areas are maintenance, except LA. CO hot spot analyses are not finding violations.

CO protocols (Caltrans and UC Davis)- Worst-case scenarios allowed them to use a screening method.

Regulation allows states to come up with alternative protocols to EPA's modeling guidelines. A separate protocol has been approved for the SF Bay Area. Still have the guarantee that air will be cleaned up. Alternative approaches have not been challenged.

LA has had two clean years for CO. They're working on a new AQMP and it's likely they'll come in for attainment later.

Comment: Truth is at AQ monitors, regardless of the emissions levels, you can tell the air is getting cleaner.

Las Vegas: fastest growing area in country (population 85% growth in 1990's). 40 CO violations in 1980s. Last exceedance in 1998.

Question: Surprised at CO analysis. Why not more emphasis on VOC? What requires the CO analysis?

Answer: Both regulations require CO analysis (EPA and FHWA). VOC's and NOx are addressed at regional level. Can't do evaluation on a project level on VOC's. Comment: Can compare VOC and NOx emissions in the AQ analysis. If they're picking up the highest VOC/NOx alternative, then they'll need to deal with that later on. Comment: Burden analysis. Do they really assist in making a decision?

Health Effects

Question: PM2.5, health standpoint it's a big issue. Designations not to be made until end of 2004. Is there a way to start considering the health issues related to PM2.5 in the NEPA process now?

Specifically related to trucks, buses, etc. Answer: We addressed this yesterday and agreed that it would have to wait until all the requirements kick in.

Project Alternatives

Question: If it's something like MOBILE6 that looks at impact analysis and exposure, is it something that should receive more focus? Answer: Might want to look at it if there's a great difference between alternatives.

Comment: VOC probably won't change among alternatives. NOx would change much more, if the question were, for example, signalization versus bypass or whatever.

Comment: Don't want to imply that if the standards were met under a regional plan, they wouldn't be met under the project analysis. Burden analysis hasn't ever really made a difference in Region 1, but it's something that adds to the general argument.

PM 10 Qualitative Analysis (FHWA)

Guidance came out in Sept 2001 to assist practitioners.

PM 10 protocol being done by UC Davis. Presenting a paper at AWMA Conference in San Diego on this. (June 2003)

Need a lot more research.

Watson and Child research.

NEPA and General Conformity

Question: General conformity, NEPA practitioners. When does general conformity need to be done?

Answer: All federal actions. Do it in conjunction with the draft EIS. Now it's thought that some of the modeling is too expensive. Sometimes there can be huge differences among alternatives. Committing to do and action and actually taking the action are different things. Comment: Many federal actions do not require modeling. They must say that they looked at conformity. Comment: They need to address it, but they don't necessarily have to make a determination.

Comment: When DOD complained, it was the de minimis level that got bumped up.

Comment: Timing doesn't look good if in the final document, you give a draft conformity determination. The ROD is part of the agency's final determination. There's no real obligation to do it at this time.

Question: Tenets of NEPA – environmental analysis. Doesn't this include a general conformity determination? Why would you do anything but one? Answer: One alternative might be de minimis and one might not be. If you truly don't know which alternative you're going to pick, then it's hard to do conformity. DOD, for example, might be driven by other factors. In the EIS, you have to delve into this to a certain extent. Comment: It might be the best place to do it. We can't require that they do it before the final EIS, but can suggest it. Comment: It's also the lead agency's obligation to complete the general conformity determination.

Question: Secondary impacts / affects analysis associated with new road projects. Regional model for big road project ran with /without the project. They got different totals in population and employment for areas. Nonattainment area. Difference was really small for pop and employment. Huge new roadway with lots of interchanges. MPO had hard time using any other numbers than theirs. Are there other methods that could be used? They thought they had to use the same numbers they used for conformity. Answer: I-93 in New Hampshire.

Conclusions

Regional and project-level conformity are linked.

Might be able to streamline CO hotspot analysis and allow them to put resources elsewhere.

Consultation with EPA on construction emissions. Communication is not very good. Part of it is an education process, learning the capabilities of the contractors in terms of mitigation. Program in CA where contractors are getting incentives for using cleaner equipment. It's a pilot program that requires the dirty equipment is not used elsewhere.

Need to get parties together so they can see what mitigation projects are useable.

Resources

Comment: Conformity Reference Guide – FHWA website under AQ. This is a great resource.